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Students learn to maintain lighting conditions in Public Schools. - See Schools photo

DON'T MISS THESE FEATURES:

Dr. Knight discusses recent report on the 48 states

Sports give formulas for comfortable school lighting

How all Denver classrooms will be a joy forever

How to organize a community adult education program

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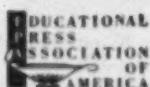
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in Education Index

48 STATE SCHOOL SYSTEMS

Despite wide discrepancies encouraging advances
are being made year after year

By EDGAR W. KNIGHT

School Management's Educational Commentator

WHILE the House Committee on Labor and Education was struggling with the federal aid bill and Mrs. Eleanor Roosevelt and Cardinal Francis Spellman were in controversy over the religious issue involved in federal aid, a significant report came out of Washington on educational expenditures for education by the American States, "The Forty-Eight State School Systems."

An Associated Press Dispatch reported, what was perhaps already generally known, that the American States spend more on education than on any other activity. In the year ending June 30, 1948, more than one-fifth of all expenditures by the states, \$2,312,000,000, went to schools. Next in line were highways, \$1,989,000,000, public welfare and relief, \$1,609,000,000, and hospitals for the handicapped, \$581,000,000. These four functions accounted for more than two-thirds of all state spending. The states were also spending \$71,000,000 for interest on debt and \$179,000,000 for retirement of debt.

All the so-called principles of American education—free, universal, nonsectarian, compulsory, public support and public control—have been bitterly fought over in this country. Probably none has been more bitterly fought over than public support and control and compulsory-attendance legislation.

The fact that education in this country began as a local interest and activity caused long and stubborn resistance to public support and control. And the belief that compulsory-attendance legislation which extended from 1852 in Massachusetts to 1918 in Mississippi was an invasion of parental function and the liberty of parents delayed the development of this principle.

Difficult Opposition

As late as 1892, a plank in the platform of "one of the greatest political parties in a Western state distinguished for its excellent educational institutions and the high and law-abiding character of its citizenship" asserted opposition to state interference with parental rights and rights of conscience in the education of children, as "an infringement of the fundamental democratic doctrine...."

But it was not until 1925 that the Supreme Court of the United States significantly held that American children could not be compelled to attend public schools. Bitter controversy waged about each of these principles and not all of them are fully and practically established in every community. But it may be noted



Dr. Knight, Professor of Education, University of North Carolina

that increasing faith in them has been exhibited in the long and laborious struggles which the American people have been willing to engage in that these principles might be as widely applied as possible. Hence the expenditure of large state funds for schools.

While the size of these figures may seem very impressive to most people who examine them, many good and intelligent people advocate larger state educational support. Equally impressive, however, are the wide differences among the states in their financial support of public education. This conspicuous fact is brought out in the extraordinary publication, "The Forty-Eight State School Systems," published this year by the Council of State Governments at the suggestion of the 40th annual meeting of the Governors' Conference. It is one of the most important studies to appear on public educational conditions in this country. (See August SCHOOL MANAGEMENT, page 33 for review.)

State Responsibility

Here are found many significant and some disturbing facts, all documented from verifiable official records of current educational practices. Here managers and teachers of public schools may learn something about how the schools got this way. They will see afresh that public education is a responsibility of the various states, firmly embedded in their constitutions and supported by tradition and decisions of the courts. This responsibility is more than a theory and tradition, more than a legal convention. It is a living principle in public education that the American people, through long years of toil, have developed. They seem to mean to put it into as wide practical application as possible.

The report shows that the "tide of public concern for education has brought increased expenditures for education in every state in the past 10 years, and has stimulated serious efforts to improve the basic structure of education." Substantial gains have been made in developing good programs of elementary and secondary education within reach of all; but in some states "progress has been retarded by serious defects in organization, administration, and methods of financing education." All in all, a considerable amount of progress has been made during the past decade.

This progress, however, has been uneven, as one would naturally expect. In some respects educational advance has been more marked in some educational (Turn to page 20)

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MODERN TECHNIQUES FOR SCHOOL LIGHTING

Comfortable lighting depends on so many factors—controlled
daylight, luminaires, color, maintenance—

By W. H. KAHLER and JOHN J. NEIDHART
Lighting Engineers, Westinghouse Electric Corporation

THE necessity for adequate school lighting is recognized by school authorities, architects, and parents. The new ASA "American Standard Practice of School Lighting" calls for a minimum of 30 foot-candles in classrooms plus measures to control the quality of lighting. The problem now confronting

planners of school buildings is how to do the job properly, commensurate with financial means. It is possible to maintain in a schoolroom at all times a uniform distribution of light of the proper level, using natural daylight as much as possible on bright days and extra artificial illumination on dark days.

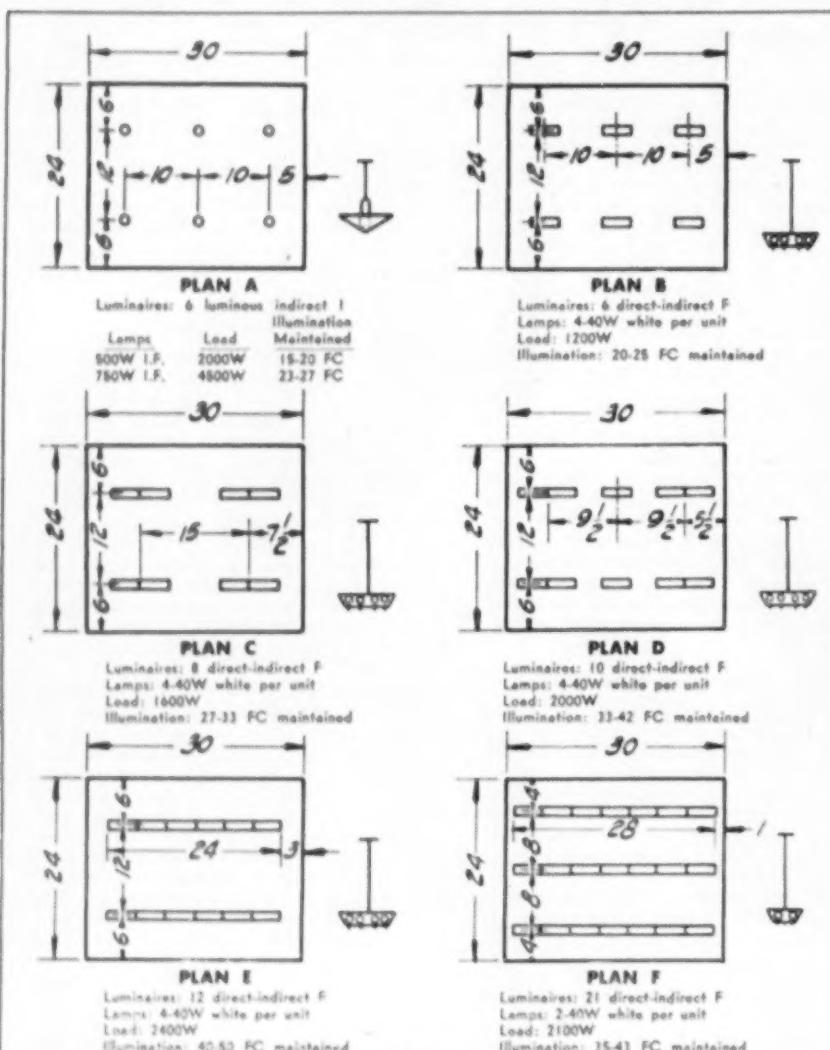


FIGURE 1
Six basic methods of illuminating a classroom. In Plan A, six indirect, incandescent luminaires are used while in the remaining plans, fluorescent lamps are used in direct-indirect units. All the plans are for a typical schoolroom 24 by 30 feet by 12 feet high, with windows along one side.

Physical characteristics of classrooms are fairly well standardized. Rooms are usually about 24 by 30 feet with a 12-foot ceiling height and windows along one side of the room. There are many lighting plans that can be employed for classrooms. Figure 1 on this page shows six of the most satisfactory plans using modern lighting equipment that can be considered. A representative sketch of the type of luminaire that should be employed is shown at the right of each plan. The approximate maintained illumination levels for each are shown.

Plan A is for luminous-indirect luminaires using incandescent lamps. This unit directs practically all of the light upward, and the ceiling serves as a secondary reflector which diffuses the light and redirects it downward. Either 500-watt or 750-watt lamps can be used with this system of lighting.

The lower brightness of the fluorescent lamp makes it possible to use a luminaire that directs about half of its output downward for maximum utilization. Half of the output is directed upward to illuminate the ceiling, thereby decreasing the brightness ratio between the luminaire and the ceiling and increasing diffusion. Shielding of the lamp from direct view is provided by diffusing glass or plastic side panels and a louvre bottom which does not readily collect dirt.

Plans B, C, D, and E require a luminaire designed for four 40-watt fluorescent lamps, and Plan F requires a unit for two 40-watt lamps. Lighting results that can be expected from each of these basic plans will be discussed from the standpoint of average illumination level, illumination distribution or uniformity, brightness distribution, and cost.

With an abundance of daylight available outdoors during most of the daytime school hours, it seems logical to give careful consideration to ways of using natural lighting. In fact, studies by architects and illuminating engineers have shown that the use of certain architectural and mechanical devices will result in very effective classroom daylighting. However, even where these special design features are employed, artificial lighting is necessary to compensate for cloudy days and short days with a minimum of daylight.

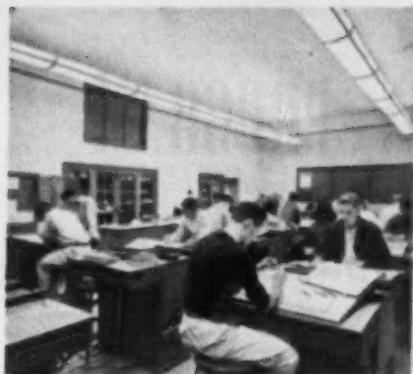
The majority of new and existing classrooms are of standard construction with windows on one side only. Even on a bright day, natural lighting is sufficient only for less than half of the room closest to the windows. Illumination in the other half must be supplemented with artificial lighting to maintain a minimum of 30 foot-candles. On the dark days the first row of desks may receive 30 foot-candles from natural lighting, but illumination on other desks will be insufficient, and even more artificial lighting must be supplied to make the illumination adequate.

On bright days, artificial lighting is required for only the inner half of the room, and thus only the inner row of luminaires is used. On dark days, however, both inner and outer rows are required to maintain 30 foot-candles or more on all desks.

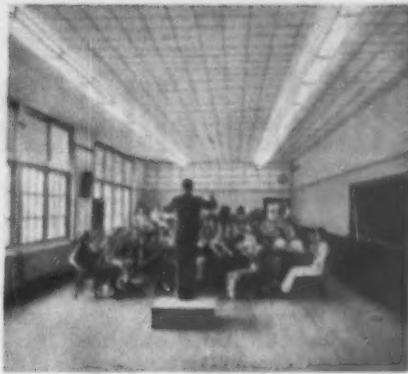
The lighting system must be designed to provide a relatively uniform distribution of artificial light. Actual distribution of light in the room depends upon the photometric distribution from the luminaire, spacing, mounting, and ceiling height, and luminaire arrangement. Luminaires that have a narrow photometric distribution and predominant downward component must be spaced closer together than luminaires with a wide distribution and predominant upward component.

Maximum spacing of luminaires for any given mounting height should correspond to the luminaire manufacturer's

(Turn to page 21)



Pleasant mechanical-drawing room, South High



It's easier to read music in this band room



East High's sewing room is ideally lighted

THREE-WAY LIGHTING IN THE DENVER SCHOOLS

Every classroom will have new lighting by next month

By A. HELEN ANDERSON
Director of Publications, Denver Public Schools

THREE-WAY lighting as interpreted by the Denver public schools means electric fixtures, redecorating of walls, and the refinishing of floors and furniture. All three of these are necessary in the conservation of eye power, for dark enamel paint, dark floors, and dark, varnished furniture destroy the beneficial effects derived from the installation of artificial lighting.

To date between 18,000 and 19,000 fluorescent fixtures have been installed in the Denver public schools. By December 1, the total will be more than 23,000; and by that time, every classroom will have been provided with artificial lighting.

In addition, the nondescript buff colors that decked the walls of every classroom will have disappeared under soft pastel colors—powder blue, pale yellow, cream, light green, aqua, and peach. The program of refinishing the floors and furniture is under way. The dark oils and the varnishes of several generations—which marked adherence to the philosophy that durability comes first—are being removed as fast as possible. The natural light color of wood is emerging from the shiny varnishes of other years.

Today the schoolrooms of Denver are places of beauty. Pupils, teachers say, are actually better behaved; and their classroom performance is improved. Teachers themselves find it easier to work. Parents have the feeling that something is being done for their children, even in those older buildings which must live out their usefulness.

However, lack of artificial light and dark paint are certainly not the only factors that created a cavernous darkness in some of Denver's schoolrooms. The very architecture of the buildings contributed to the Stygian gloom of the interiors. Buildings with the high, narrow Victorian windows of the eighties and nineties are not much darker than some of the newer buildings in which architects sacrificed light for the sake of design. In their eagerness

to reproduce exteriors reflecting Renaissance, Tudor, and Jacobean periods, architects of the 1920's and 1930's forgot that even Colorado sunlight cannot penetrate brick walls. The buildings under design in the current building program will be functional—and this time period design will be forgotten in the interest of the eyesight and nerves of the boys and girls who spend so many hours in school.

When the Denver board of education began two years ago to study the lighting program, it discovered that in many buildings—from those built in the roaring, mining days of the eighties to the present time—only one electric outlet had been provided. Many classrooms had none at all. What daylight could get through the windows had been regarded as sufficient for schoolroom purposes. (Turn to page 23)

The typing classes work happily under fluorescent lights



How to Organize

A COMMUNITY ADULT EDUCATION PROGRAM

THE position of superintendent of schools in these days admittedly is not an easy one, with the many vexing problems of increasing enrollment, costly building programs, broadened curricular offerings, and limited financial resources, to mention only a few. However, the superintendent who fails to do what he can to provide for the education of adults in the community is neglecting a responsibility and overlooking an opportunity.

It is the purpose of this article to provide specific suggestions for the helpful guidance of superintendents and boards of education in initiating or expanding programs of adult education in their communities. Since larger cities already have in operation well-organized and well-planned programs, the suggestions will be aimed principally toward smaller cities and communities.

In building a sound program of adult education at the community level, it is well to heed certain organizational principles which have evolved from the results of experience in communities with successful programs. These may be summarized as follows:

1. There should be local control and planning of the



Five concrete steps are outlined for the superintendent and the school board planning this activity

By ROBEN J. MAASKE

President, Eastern Oregon College, La Grande, Oregon

program. It is axiomatic that people are naturally more interested in anything which they have a hand in planning, and for which they assume some responsibilities. Any superimposed program is soon likely to fall of its own weight. Hence, the clear need for observing the principle of local control and planning as basic in conceiving the community program of adult education. Just how this may be done will be told later.

2. There should be community coordination of the necessary leadership. This principle is highly important. It points to the necessity of bringing together and coordinating the leaders of organizations, agen-

cies, and groups in the community. It assures unified backing for the enterprise of starting an organized program of education for adults. There often exist certain jealousies and assumed prerogatives among organizations and leaders. This makes it desirable that as many as possible be brought cooperatively into the picture at the outset. The situation varies with the community, but the superintendent will usually be cognizant of the state of affairs.

3. There should be local participation in financing the program. This principle is sound for the same general reasons as the first principle. The extent and manner of financial participation will vary greatly, depending upon such factors as: (a) amount of state aid; (b) local public school funds available for adult education; (c) ability and willingness of local organizations and agencies to assist financially; and (d) sentiment regarding the size of the fees for materials to be paid by local participants in the classes. It is clear, however, that as the local community makes an investment financially in the program, it stimulates a much greater general interest in the success of the undertaking.



Members of a home-use typing class listen to directions from the leader in Salem, Oregon. No more handwritten letters! There is much keen enthusiasm when adults work on upholstering their own furniture. They really do learn by doing!



An Americanization class leader helps one of his Turkish students review citizenship materials before class time



Arts and crafts classes in Salem bring out interested groups of hobby-bent adults to work on all sorts of projects



4. There should be a well-balanced program of offerings to meet the varying needs and interests of the adults. The ultimate test of the success of the program depends upon whether it not only meets the felt needs and interests of adults, but stimulates them to want to explore other fields and develop new interests. It is important that the early attempts provide for classes and other learning activities which appeal to a variety of the people. It is desirable to build the program upon ascertained needs and interests of adults. It will have appeal in proportion to the extent to which it meets such needs and interests.

5. There should be utilized all available community educational resources. Some organizations may already have programs operating which are not widely known. Others will have leadership or other resources which can contribute to the total program if they are properly tapped. The superintendent and his aides will have ideas on how these resources may be approached and utilized. One can readily think of the following:

- (a) The public school, its staff and facilities.
- (b) The public library.
- (c) Museum and art institute.
- (d) The extension division of the state university, near-by college, or junior college.
- (e) State and federal agencies such as agricultural and home extension services.
- (f) City health, social, and recreational agencies, and similar ones.
- (g) Churches and church leaders.

It is at this point that the superintendent who has had but little experience with an adult education program usually feels quite definitely at a loss. This is not at all surprising. The steps to be taken will require careful planning and clear thinking. Local conditions and circumstances need to be studiously considered. While the superintendent, or a designated staff aid in adult education, will need to exercise constructive leadership, it should be of a guiding nature rather than a "forcing" process.

Here Are the Steps

An attempt will be made in the following paragraphs to outline clearly the steps found to be successful in organizing such a program.

Step one is the organization of a council. This council should be composed of representatives of varied interests in the community. Usually included are representatives from leading educational and selected semi-educational or informative lay agencies and organizations exercising leadership, for example:

- (a) Public schools.
- (b) Public library.
- (c) Institution of higher education.
- (d) Service clubs.
- (e) Community club.
- (f) Labor unions.
- (g) Chamber of Commerce.
- (h) Churches.
- (i) Museum.
- (j) Art institute or league.
- (k) Little theater or drama club.
- (l) Recreational agencies.
- (m) American Association of University Women.
- (n) League of Women Voters.
- (o) Grange or Farm Bureau.
- (p) Social agencies, and similar or unique agencies operating successfully in the city and its suburban area.

Usually the council should include one representative from each group to serve for staggered terms of from one to three or five years. Each should be designated by the president or elected by the membership of his group. Normally, it is unwise to have more than 20 or less than

10 or 12 members on the community council. Representativeness and quality of individual leaders are main criteria.

There are various specific ways of getting the council idea started. Some workable ways are:

(a). The superintendent may call together a small committee of three to five leaders with a known interest in adult education. After discussion and study, this committee might then launch plans for having selected representative agen-

cies designate or elect a representative to the council.

(b) The superintendent, or a small carefully selected committee associated with him, might extend invitations to the presidents of selected agencies to discuss possible plans for an education program for adults. The council idea might well grow out of this or a committee of laymen aided by the superintendent, or the board of education might extend such an invitation.

(c) A respected leader in the community, other than the superintendent, might be encouraged to extend such invitations as indicated under (b) or initiate the procedure under (a).

It is assumed that the superintendent, or someone on his staff designated by him, will be in on the planning stages for getting the council organized. The exact method for doing it can be chosen in the light of local conditions. It may

(Turn to page 23)

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USES OF ROECAL

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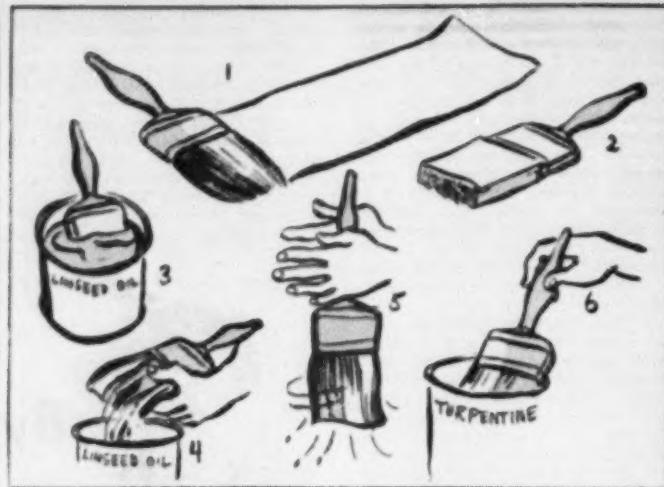
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POINTERS ON PAINTING FROM NAVY KNOW-HOW

Condensed from "Brush Up on Your Painting" issued by Bureau of Ships, Navy Dept.

SELECTION of the right brush is the first step in making the job of painting more efficient and easier. Let your common sense guide you. You wouldn't use a little one-inch brush to paint a large flat area any more than you'd boil water with a teaspoon. It's better to use a slightly oversized brush than an undersize model.

When you've chosen the right size brush, you've got to break it in just like a pair of new shoes. A properly broken in brush pays dividends later on in improved, lengthened performance.

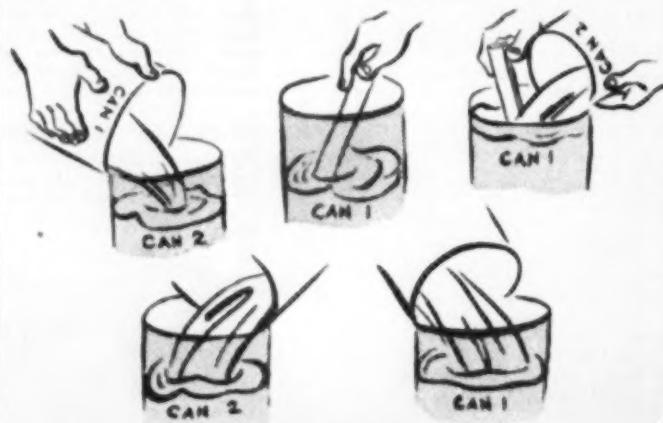
A brush is made up of three parts—handle, bristles, and ferrule. The ferrule is the metal band holding the bristles in place. The heel is the portion of the bristles adjacent to the ferrule.

Some of the bristles are porous and will absorb pigment particles, thinners, and so forth. This can be prevented by soaking them in raw linseed oil for 48 to 72 hours. Soaking makes the brush more flexible, easier to clean, and better to use. Wrap the brush before suspending it in the linseed oil. Fold it in heavy paper five times its width and large enough to cover the bristles on both

sides from ferrule to ferrule. The brush will now hold its shape and may be rested on its end. Place the wrapped brush in a can of linseed oil so the oil level is above the top of the paper. Unwrap every 24 hours and work fresh linseed oil into the bristles.

When the brush has been soaked sufficiently, draw the surplus oil from the bristles by spinning between the palms of your hand. Then rinse the bristles in mineral spirits or turpentine until all the excess oil is removed. The brush is now ready for use.

To keep a brush in good shape, clean paint or enamel from it after each use. Work it out in mineral spirits or turpentine. Do not press the brush down endwise as this will force it out of shape. Work the solvent well into the heel. To remove paint clinging to the bristles, lay the brush flat on a board and scrape the bristles with a blunt putty knife. Work again in the solvent and scrub out the loose paint with a stubby, one-inch brush. Rinse again in thinner and spin to remove all liquid. Then transfer the brush to some clean thinner and rinse it out as much as possible.



Save the dirty thinner. When it stands, the pigment will settle to the bottom and the thinner can be poured off and used again for cleaning.

After the brush has been cleaned, suspend it in raw linseed oil by hanging it from the handle. Again, it's best to wrap it before suspending it. When the brush is to be used again, remove the wrapper, and spin to remove the linseed oil. Then rinse in paint thinner. Do not clean a paint brush with paint remover. It will ruin it. And don't take the lazy man's way out by throwing used brushes out to avoid cleaning them. Brushes are expensive.

A paint brush has an "Achilles heel." Don't attack it in this vulnerable spot. In painting, dip the clean brush only a short way into the paint to avoid getting it into the heel, where it will accumulate and cause all kinds of trouble.

Don't use a good brush endwise in pinch-tight corners, recesses, and the like. This practice rounds out the corners and also causes the brush to "finger," making it useless for cutting in sharp lines.

Hold the brush at a 45-degree angle to the work. Cross lapping will insure complete and solid coverage.

"Don'ts" for Brush Work

To summarize, observe the following "don'ts" for better brush work:

1. Don't ever leave a brush in water or thinner. This will cause it to flare out of shape.

2. Don't forget to clean the brush thoroughly each night. As paint accumulates, the brush flares out of shape and loses its flexibility.

3. Don't leave the brush with the weight on the bristles; suspend from the handle.

4. Don't allow paint to accumulate in the heel.

5. Don't use the brush in acids or stained lime.

Accentuate the positive from the start by opening the paint can the correct way. Use a flattened spike to release the lid. This keeps the cover flat so it can be used again. Don't throw used cans away. Save them. You will find that they have many uses.

If a skin has formed on the surface of the paint, remove it carefully and discard it. Paint is composed of oil, pigment, drier, and thinner, all of which separate upon standing. The paint must be thoroughly mixed before using.

Mixing Paint Thoroughly

There are four steps to this procedure:

1. Pour the top two-thirds into another can (can No. 2).

2. Stir the pigment and liquid left in the first can (can No. 1) until it is good and smooth.

3. Gradually add can No. 2 to can No. 1, continuing to stir.

4. Pour the paint between the two cans until uniformly smooth.

If there are still particles or skins undissolved at this point, remove them by straining the paint through a wire screen or cheese cloth.

There was once a blithe spirit who remarked that he wouldn't mind painting so much, but he hated to have the stuff running down his arm. This same character would actually enjoy painting if he knew how to stand correctly and handle his brush right. Get the correct grip on the brush. Hold it well up in your hand, resting three fingers on the metal band. Dip it in the paint a distance half the length of the bristle. Pat the brush gently on the inside of the can—not the edge—to remove excess paint. This not only leaves the paint can in better looking condition, but it serves to pat the paint into the brush as a sort of reserve.

To get complete coverage, the paint

must be applied horizontally (laying on) and vertically (laying off). In laying on, apply the paint freely and smoothly across the surface. Then, lay off by crossing the first strokes and working successive strokes up and down.

On interiors, paint the overhead first and work from the far corner to avoid dripping. Paint in strips, laying on the shortest distance and laying off the longest distance. Some surfaces, like pipes, must be painted in straight strokes rather

than as was described for flat surfaces.

Prevent waste by pouring unused paint into large containers. First, strain all lumps. Then seal the container tightly. Store it in a cool, dry place. Label each can with the name, formula number, and date of manufacture. Place the oldest cans in front so they will be used first. Turn cans bottom up at least once every three months.

Some painting must be done in close quarters. When this is the case, you may

inhale fumes. If you inhale enough of the fumes you'll go out like a light. Watch for the danger signs. Headache and dizziness are warning to get out for fresh air. In severe cases, lie flat on your back and breathe heavily to rid your system of the fumes. Always test air before entering a room which has been painted, then closed. If you don't you'll wake up feeling as if you'd been hit by Joe Louis—if you wake up.

(Turn page)

SM-4D

There Is An RCA Sound System That Meets The Needs Of Your School

Standard Single Channel System

Here's a handsome low-cost Single Channel Program Console that distributes selected programs or administrative announcements to any or all locations equipped with loudspeakers in the school or grounds. Superb value, an exceptional buy for the medium-size elementary or junior high school working on a limited budget.

- 20 room or zone distribution switches with provision for installation of up to 20 more.
- 5 input circuits permit program pickup from any location.
- Built-in de luxe RCA radio with AM, FM and short-wave reception.
- Volume indicator meter.
- Provision for attaching separate record player or transcription turntable.

- Talk back or two-way communication feature (optional equipment).
- Master emergency switch.

Standard Dual Channel System

Administrators, supervisors, teachers and the student body use this Dual Channel Program Console for a variety of instructive purposes and for administrative control. Provides for the distribution of teaching programs or announcements to selected classrooms over one channel while the second channel simultaneously permits intercommunication or distribution of an additional program to other classrooms or areas in the school or grounds. Priced within the budget of high, junior high or the larger elementary schools.

- 9 input circuits provide numerous possibilities for program pickups from radio, phonograph and microphones in auditorium and elsewhere.
- Switches control loudspeakers for 20 to 60 classrooms or areas.
- Provision for attaching separate record player, transcription turntable and radio tuner.
- Volume indicator meter.

- 2 high-quality 25-watt amplifiers.
- Two-way communication between classrooms and committee.
- Master emergency switch.

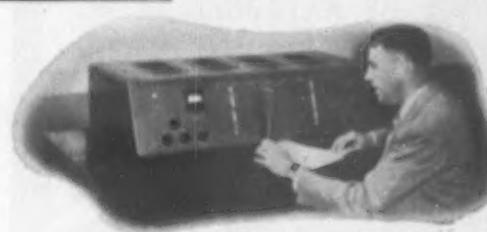
De Luxe Dual Channel Equipment

Provides complete audio facilities for the larger high schools and colleges. Dual channel services for administrative broadcasts . . . teaching programs . . . radio listening . . . in-school program originations . . . record and transcription reproduction . . . independent two-way intercommunication (optional), unit-built from standardized frames and panels to allow numerous combinations of basic units. Gives you the advantage of a "custom-made" sound system within the price range of regular production equipment.

- De luxe studio-type control console.
- Individual loudspeaker selection for up to 120 rooms or areas.
- Provision for at least 10 program input circuits if desired.
- AM, FM and short-wave tuner (optional).
- Transcription or record player (optional).

- Master emergency switch.
- Provision for expansion of other features as required.
- Intercommunication (optional).

Whatever your requirements might be for a sound system for your school, RCA will be glad to help you select the correct system. See your RCA Sound Products Distributor, or write to: RCA Sound Products, Dept. 81-K.



SOUND PRODUCTS

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ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

In Canada: RCA VICTOR Company Limited, Montreal

(Continued from page 9)

Paint materials are highly inflammable. Saturated rags in pockets or confined places can catch on fire through spontaneous combustion. Place the rags in a bucket of water.

Turpentine is all right in its place, but don't use it on that skin you love to touch. The best way to keep it off your body is to keep your hair and body covered.

Inspect ropes and safety belts when

painting from a staging. Secure the paint bucket. Keep tools anchored to prevent sudden showers on unwary bystanders.

WHEN Parma, a Cleveland suburb, found it almost impossible to obtain teachers at its minimum salary of \$2,000, superintendent Carl C. Byers recommended an increased level. The board of education therupon voted to boost the minimum to \$2,400, and also granted \$400

raises to the system's 115 teachers, principals, and supervisors.

The increases bring Parma's salaries in line with those paid in Cleveland and other major suburbs. Under the new regulations, teachers with bachelor's degrees are hired at \$2,400, while those with master's degrees start at \$2,600. Increases in maximum salaries are contemplated after board study. The board also plans to adjust salaries of non-teaching employees.

Nominations Are Invited

for an annual

PARENTS' MAGAZINE AWARD
for the most outstanding service rendered
by a local Mothers Club or PTA

PARENTS' MAGAZINE will award a silver cup and a \$100 check each year to the mothers club, parent-teacher association, or other local group concerned with child welfare, which has rendered the most outstanding service to a school, a neighborhood, or community during the past year.

Send nominations to PARENTS' MAGAZINE, 52 Vanderbilt Avenue, New York 17, N. Y., by December 31, 1949. Describe in detail the service rendered. Tell the number of children benefiting from the activity. And give the name and address of the school principal or other official from whom, if advisable, PARENTS' MAGAZINE can get an impartial judgment of the service rendered.

Posters Won't Get Us Good Teachers!

By EARL BLAND
Superintendent, Marathon Independent Schools, Marathon, Texas

Reprinted from *The Texas Outlook*

EVERY time I see one of the posters that are beginning to appear in the halls of some of our colleges and high schools, I have a very strong urge to tear it down and trample on it. They point out, these posters, all of the attractive features of the teaching profession and urge all who will to come in. They emphasize good pay, short hours, and long vacations!

Can you imagine the medical association putting up posters saying: "Be a doctor! Get from \$500 to \$1,000 for thirty minutes' work in the operating room!" Or the bar association: "Be a lawyer! Think of getting a fat fee for showing off for a few hours in a crowded court room!"

I believe in the teaching profession strongly enough to have stayed with it for twenty years, sometimes at nearly starvation wages, and I am aware of the fact that we need more good teachers. But I think the poster "come-on-in-the-water-is-fine" idea of recruitment cheapens our entire profession.

Are we to fawn over anyone who says "I'll teach"? We ought to say, "Wait just a minute, Buddy. Maybe you will and maybe you won't. We've got to know more about you first."

Before we allow a person to enter the teaching profession we ought to make sure that he has got what it takes to make a good teacher. We need good teachers—but don't ever forget that adjective.

Give Rigid Tests

A student aspiring to teach should be required to take rigid tests—tests probing his background, establishing an above-the-average I.Q. and above all, showing conclusive evidence of a pleasing personality.

Yes, we need more good teachers but it will be better for our classrooms to remain empty than to fill them with sloppy incompetents attracted to the profession by good pay, short hours, and long vacations. When the intelligent youngster starts casting about for a life-work, the first thing that he does is to take a look at the people who are doing that work. He is more likely to be impressed if he finds those people respected, well paid, proud of their work, and secure in their profession, than he will be by posters, pleading with him to become a teacher.

THE PROBLEM!

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SM-SD

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Nurse Has Big Role In Solving School Medical Problems

By GEORGE M. WHEATLEY

Condensed from *Public Health Nursing*

WITH the growing knowledge of the complex factors involved in health and disease, the scope of the school health program has broadened. An awareness has come of many untapped areas in the field of child health. New goals are being set.

It is one thing to set new goals and another to reach them. For success there must be unity of purpose and coordination of effort among medical, public health, and educational workers. The nurse is one of the important members of this coalition for health.

She is expected to find the problem in the individual child and then follow through in an effort to clear it up. It is her duty to confer with the teacher in the selection of pupils who need medical examinations or follow-up care, and she must be prepared to give the physician complete information about the child when he is referred for examination.

Knows Child's Problems

The nurse interviews parents, sometimes in the home, seeking their cooperation in having mental and physical defects corrected. She tells them about the resources of the community for giving all sorts of needed care—cardiac, dental, orthopedic, psychiatric. These problems cannot be tackled with only a sketchy knowledge of the child. The nurse must really know him and his problems before she can convince a mother of the wisdom of her advice.

She should be alert to unhygienic or unsafe conditions in and around the school and call them to the attention of the proper authorities. The school staff is advised by her about the age levels at which children will be receptive to instruction in personal hygiene, infectious disease control, first aid, safety, and other similar matters. She creates opportunities to emphasize such instruction in her association with the child and his parents. She may, if she has time, organize parent groups for the discussion of child health problems.

The public health nurse has had an active part in the brilliant work of the past few decades in reducing mortality among children from five to 19 years of age. Even since 1930, the decline in mortality among school-age children has been striking.

Helped Reduce Mortality

This saving in child life is in great measure the product of half a century's discoveries and their application in controlling the infectious diseases of childhood and youth. Diphtheria, smallpox, and whooping cough are held in check by immunizations in infancy and the preschool years, with "booster" inoculations against diphtheria and smallpox in school years. Such implements as these have removed from the school staff some of the burden of communicable disease control.

But the milder communicable diseases of childhood—measles, German measles, chickenpox, and mumps—will probably continue to be causes of illness, their importance varying with the prevalence of epidemics. For while protective substances are at hand for temporarily preventing measles and for making an attack milder, medical opinion leans to the view that its prevention is not desirable except in very young or feeble children. This is be-

cause measles, like a few other communicable diseases, is usually less severe in children than in adults.

The acute respiratory infections are another group of diseases which have a diminishing mortality, but hold a leading place as causes of illness. United States Public Health Service studies show that the common cold is still the leading cause of illness, followed by tonsillitis, sore throat, grippe, and influenza.

So far we have no specific preventives against the common cold. In the main, reliance must be placed on such general measures as maintaining a hygienic environment in the home and school; educating parents and children to the importance of building up resistance and assuming responsibility for protecting others from their infections; and teamwork between the nurse and teacher for early detection.

There is still no certain way of pre-

venting influenza. However, there is a growing hope that epidemic influenza of certain types at least may be controlled by recently discovered vaccines.

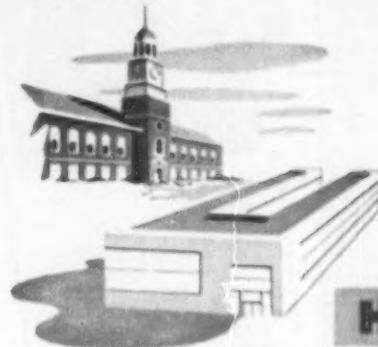
Heart disease and rheumatic fever are the main chronic illnesses in the school years. A small proportion of young children has congenital heart defects, and in the majority of cases heart impairment is due to rheumatic fever. This runs in families, and the onset and recurrences appear when

SM-7D

THE CASE FOR GOOD SCHOOL LIGHTING

WHY?

Experts estimate that 80% of a child's learning is absorbed through his eyes. That fact alone is reason enough for the *best* school lighting. But then, add other benefits—easier teaching, happier, healthier pupils, less disciplinary problems for principals, less work for custodians—and good lighting assumes *top importance*.



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Planning a lighting program and choosing fixtures is no small job. Your local electric utility will be glad to help. The services of experienced Day-Brite lighting engineers, located throughout the country, are yours for the asking. Let these experts help draw up lighting layouts and specifications. Ask your Day-Brite representative to actually install fixtures in a sample classroom.

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IT'S EASY TO SEE WHEN IT'S

NOW! **DAY-BRITE**
Lighting

Nurse's Role in Solving School Problems

(Continued from page 11)

streptococcal respiratory infections are present.

A child who has had an attack of rheumatic fever, or who comes from a family of which one member or more has had rheumatic fever, needs watching. Frequent colds and sore throats, failure to gain weight combined with listlessness and pallor, muscle or joint

aches and pains, the onset of nervousness, and twisting or jerking motions indicate the need of a thorough medical examination.

Now that mortality from the chief diseases has been lowered, accidents are the main target for reduction of deaths in school children. Accident prevention must be approached from

various angles, involving as it does psychological factors, individual instruction and training, and community enterprises.

If a child has repeated accidents, the nurse's responsibility does not end with first aid; she must look for implications. There are likely to be emotional conflicts in the accident-prone child which may account for his falls, burns, cuts, and scratches. The nurse will wish to know how the principal and

MR. and MRS. PUBLIC need educating about education...

That is why American Seating Company is running these full-page messages in Time Magazine, as part of a continuing campaign for better schools. They point out that investments in education are investments in the future of our nation.

That this campaign is winning public recognition is becoming more and more evident. If it serves, even to a small degree, to ease the way for educators and educational institutions to do their work still better, it will have justified our efforts.

American Seating Company is close to educational problems and their relation to progress—with a familiarity resulting from more than 60 years of developing and manufacturing school furniture.

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SM-8D



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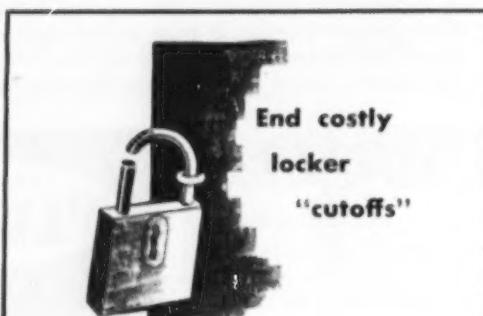
Put your property on the safe side of a tamper-proof Realock® Fence. You'll get permanent protection against trespassing, vandalism and other hazards.

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SM-9D



RD-2

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teacher regard the child, and then she may probe further and arrange a conference with the mother. The aid of a psychiatrist may be required to get at the basis of the child's difficulties.

Parents, teachers, school officials, and other citizens of a community must bear the responsibility for developing safe habits and seeing that measures to safeguard children's lives are in effect. Children can be taught to cross streets safely and not to play in streets and highways, but traffic laws also need to be enforced.

Vital as the problems of mortality and incapacitating illness are, they are not the only ones to be dealt with. We are becoming more and more conscious of the relationship between the individual's health in childhood and his health in middle and old age, and with this long term view of health, we are increasingly obliged to remove all handicaps that will yield to treatment. Among these handicaps are nutritional deficiencies, disorders of sight and hearing, dental defects, skin diseases, mental illness, and defects such as orthopedic conditions.

Signs of Malnutrition

There is increasing evidence that a significant proportion of children in this country show definite, if not striking, signs of malnutrition and that the cumulative effects of this on health, efficiency, growth, and development are a matter of great importance. Malnutrition may result from lack of the foods needed to maintain health, from faulty eating habits, from improper or inadequate rest, or from a physical disability which interferes with the proper absorption or utilization of the essential elements in food.

Visual and eye disorders are frequently found among school children. The nurse and teacher can often discern signs of eyestrain.

Children who are totally deaf or who have a marked loss of hearing are discovered long before they reach school because of their failure to develop normal speech. But children with limited hearing loss may first show evidence of it after they begin school.

Dental defects are very common in school children from all economic levels. The correction of these conditions demands a periodic dental examination and adequate treatment. A well-rounded dental health program requires cooperation of parents, dentists, teachers, and other school personnel.

Skin diseases may or may not be infectious in origin. Noninfectious conditions may be manifestations of nutritional deficiencies or allergy. Children with these conditions should be referred for diagnosis and treatment, and the contacts of children with contagious diseases followed up. Education in personal cleanliness and good sanitary conditions are important.

Physical-Mental Health

The relationship between physical and mental health is being recognized more fully, and a carefully planned and executed mental hygiene program is one of the urgent needs of the school. Family disharmony and adverse environmental conditions have long been known to influence the child's mental health. Children who reveal personality problems need to be referred to a psychiatrist or child guidance clinic.

The school-age child is the pivot around which these numerous health problems whirl, and the nurse is the pivot of the school staff which works on their solution. She is the go-between for the child, parent, principal, teacher, and school physician, the one to whom they look for action.



Firemen at school plants who do the work by hand will probably want to use "spread" firing if they fire frequently with small amounts of fuel. The fireman spreads the fuel as evenly as possible over the old bed of burning coal. This method is particularly effective with down-draft boilers.

If it is necessary to be absent from a low-pressure boiler for hourly periods, probably "alternate" firing should be used. In this plan the fuel is spread on one side of the fire bed only. When the side recently fired is well ignited, the other side is covered. By this method at no time is the entire bed covered with green or fresh coal.

Fresh coal, if spread too thickly over an entire fuel bed, is a major cause of the dense black smoke which sometimes is seen. This is because adequate air cannot rise through the fuel bed to supply the necessary oxygen to complete the combustion of fuel. . . . *Julius Barbour.*

On the Calendar

American Education Week, November 6-12.

School Food Service Association, Hotel Statler, Washington, D. C. November 16-18.

American Vocational Association, Atlantic City, December 6-10.

American Association of School Administrators, Atlantic City, February 25-March 2, 1950.

American Association of Junior Colleges, Roanoke, Virginia, Hotel Roanoke, February 27-March 2, 1950.

A Superintendent Views School Board Associations

By PAUL F. BOSTON

Superintendent of Schools,
La Porte, Indiana

THESE are several logical reasons why every state should have a strong organization of its local school boards. First of all, it opens the way for national affiliation with the advantages of strength and unity which always come from wider association. Also, it is the one organization which can most effectively give school board members, especially new members, a proper orientation concerning the high professional and civic responsibility which goes with this important position of public trust.

It is also true that initiative and participation on the part of lay board members can best be secured when they are organized under their own banner. The professional leadership of school administrators will not be lessened but, on the contrary, will be enhanced by increased alertness and activity on the part of school board personnel.

There is no doubt that well-organized and well-functioning associations of school board members, made up essentially of important business and professional lay persons, can wield more vital and effective influence in behalf of needed educational legislation than can professional school

people during critical sessions of state legislatures. These school board organizations, too, when functioning at full maturity, will discover how to conserve and utilize their ever-growing ex-membership for continued service in the cause of education. Finally, I believe that an independent organization of this lay character will invest more money and will do things generally in a bigger way than will a strictly professional association, or any

combination of the two organizations.

We administrators have our professional associations with their splendid records of significant service. These we need to support with accelerated effectiveness. But we should at the same time welcome and encourage vigorous organizations of school board members. The challenging problems which are ever present in the area of public education require for their best solution the combined efforts of

all agencies that are willing to grapple with them.

IN HIS 1950 budget message President Truman asked Congress for one million dollars to pay for two surveys:

1. To study the educational building needs for elementary and secondary schools.
2. To study the "most practicable means for providing scholarships for capable young people."

SM-11D



"Never called for a service-man"



New Trier Township High School, Winnetka, Ill., reports 18 years of trouble-free service from Telechron-powered clock and program systems.

"In the 18 years since our first Telechron-powered synchronous clock and program was installed," writes R. L. F. Biesemeier, Supervising Engineer of the New Trier Township High School, "we have never called for a serviceman."

"Based on our experience, we recommend Edwards Telechron-powered Clock and Program Systems without reservation."

It's a safe recommendation, Mr. Biesemeier . . . because that service record is typical. Edwards systems operate without a master clock . . . eliminating all need for otherwise frequent servicing and adjusting at this point in the system. Send for illustrated bulletin on clock and program systems.

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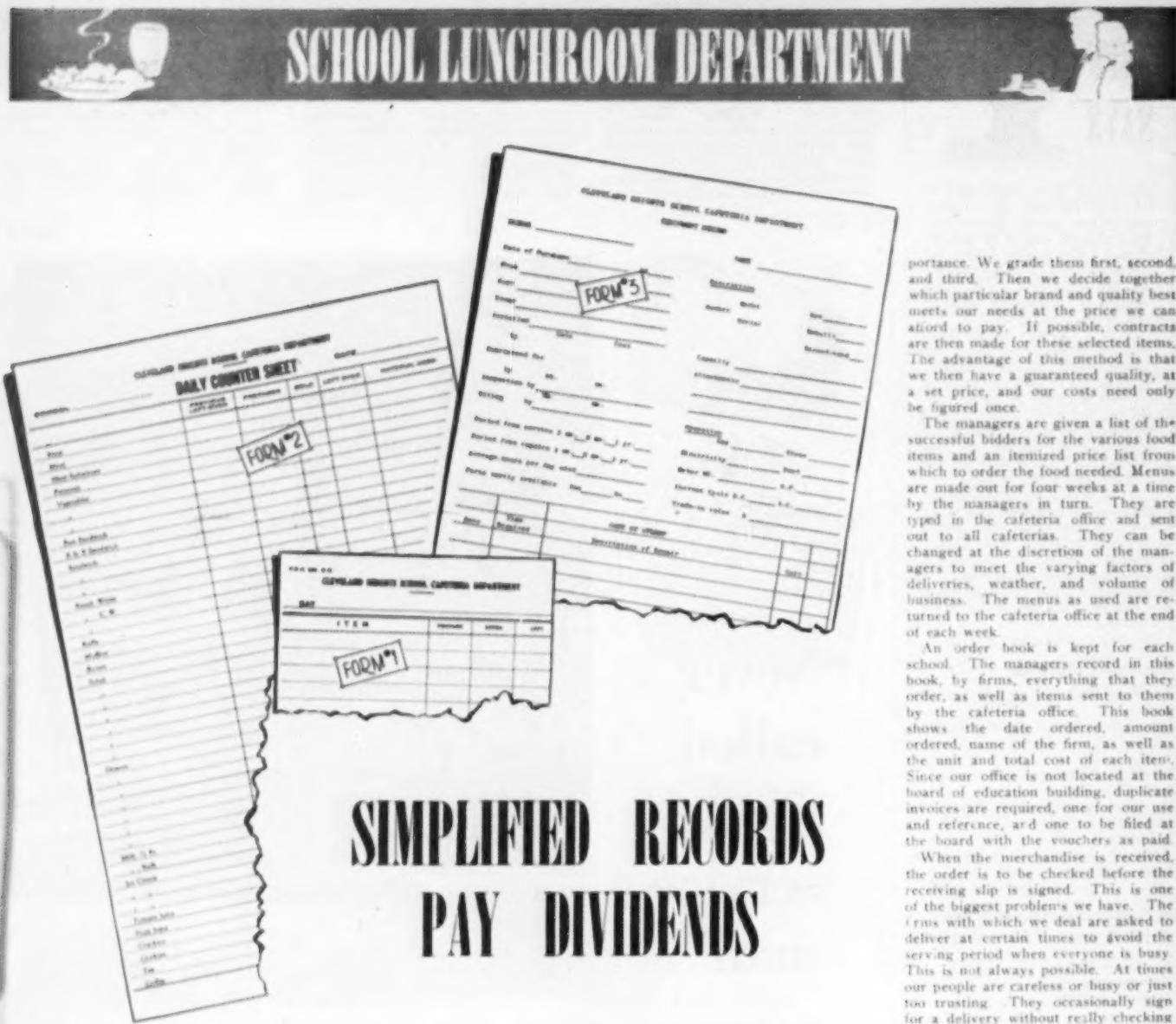


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SCHOOL MANAGEMENT Check Readers' Service Listing on page 29. Use the postcard to request further information from advertisers, and about new products

SCHOOL LUNCHROOM DEPARTMENT



SIMPLIFIED RECORDS PAY DIVIDENDS

Keep them accurately, but don't be afraid to change forms when necessary to meet new conditions

By MARY FARNAM
School Management's School Lunch Editor

SCHOOL cafeteria business is big business. It is getting bigger every year. Every cafeteria manager or director has the responsibility of handling varying amounts of money, food, supplies, and equipment. Food, supplies, and equipment are money, as each item you use in your cafeteria costs money and is used to return money to your school system. Unless records are kept accurately and intelligently, you do not have a true picture of the financial side of your operation of the cafeteria.

During the war we all thought this school cafeteria business was tough and could not possibly get any more difficult, but to my way of thinking, each year our financial problems are increasing and demanding more of our ingenuity, skill, and resourcefulness. So instead of letting the tail wag the dog, why not face the issues and have the dog wag the tail? Usable records that tell you what you want to know are easy to use and are businesslike too.

We have had several requests for an article on how to keep simple records, and the methods used for inventory of

food, supplies, and equipment. Therefore, I hope that explaining how we keep our records in Cleveland Heights will help you. Our cafeteria system is small, but that is an advantage, since there are many more small school cafeterias and small cafeteria systems than there are very large organizations.

It is efficient to keep only the records which you need and will use. An elaborate method of bookkeeping is unnecessary. Keep only the records necessary to tell you each day, each month, and each year, the facts and information for which you have use.

First, let me explain our method of ordering, buying, receiving, using, and selling food. Each June we prepare for the next school year. In July we send bids to the firms who returned bids the previous year and to the firms

who have made a request for bids during the year. Bids are returned August first on items for which we normally contract for a school year. These we check and send to the board of education for awarding to the successful bidder the second Monday night of that month. These annual contract items are: bread, milk, crackers, butter, eggs, and cheese, ice-cream, candy, and paper goods. Bids on groceries, canned goods, frozen fruits and vegetables are returned August 15. Fresh fruits and vegetables, and meat are not bought on advanced bids.

The cafeteria managers return to work one week in advance of the opening of school. At this time we cut samples of canned goods to compare them for quality, flavor, appearance, relative cost, and other factors of im-

portance. We grade them first, second, and third. Then we decide together which particular brand and quality best meets our needs at the price we can afford to pay. If possible, contracts are then made for these selected items. The advantage of this method is that we then have a guaranteed quality, at a set price, and our costs need only be figured once.

The managers are given a list of the successful bidders for the various food items and an itemized price list from which to order the food needed. Menus are made out for four weeks at a time by the managers in turn. They are typed in the cafeteria office and sent out to all cafeterias. They can be changed at the discretion of the managers to meet the varying factors of deliveries, weather, and volume of business. The menus as used are returned to the cafeteria office at the end of each week.

An order book is kept for each school. The managers record in this book, by firms, everything that they order, as well as items sent to them by the cafeteria office. This book shows the date ordered, amount ordered, name of the firm, as well as the unit and total cost of each item. Since our office is not located at the board of education building, duplicate invoices are required, one for our use and reference, and one to be filed at the board with the vouchers as paid.

When the merchandise is received, the order is to be checked before the receiving slip is signed. This is one of the biggest problems we have. The firms with which we deal are asked to deliver at certain times to avoid the serving period when everyone is busy. This is not always possible. At times our people are careless or busy or just too trusting. They occasionally sign for a delivery without really checking it because "Joe" has delivered each week for years and never made a mistake.

This is costly, because "Joe" can make a mistake, his firm can make a mistake, and it is only good business to see that you receive exactly what you order and pay for. A well-known authority on food costs has records of all kinds to show how much it actually costs any food service operator not to check all deliveries carefully. It's considerable!

In making a school survey one time I noticed that none of the deliveries was checked. Everyone seemed to be such good friends, and the exchange of conversation took up more time than would have been required to check the order being delivered. Next day I counted everything before any deliveries were made and then checked the orders by the slips that were left by the delivery men. The cafeteria workers were surprised, if not actually shocked, to think I could suspect anyone of being dishonest. I didn't suspect anyone of being dishonest, but I wanted to be sure the goods delivered tallied with the goods charged. That was not the case! So do realize that it is very

important to accurately check what you receive when you receive it.

We keep a three-way record of the food we use—first by the orders, second by checking what we receive, and third by what we use. Since our system is not big enough to need a stockroom employee to receive orders and then give them out to the various departments, we have devised a system of keeping the records right where the materials are to be used.

The food needed is determined by the menu. The manager makes out a "preparation sheet" each day for each person preparing food. Form 1 shows the item to be prepared, the amount to be prepared, and the amount left. On the back of this page are listed the materials used.

At the end of the day each employee returns her slip to the manager. From these slips, she can fill in our daily counter sheet, Form 2. This list shows the items prepared, such as soup, meat, meat substitute, and the resale items such as half-pints of milk, ice-cream, bread, and other such foods. After each food item is shown any previous leftover, the amount prepared that day, the amount sold, the amount used, and an additional column for materials used.

Popularity Records

These sheets also give the manager an excellent record of the popularity of certain foods and certain menu combinations. It is easy to look back on a counter sheet to see how many portions of liver or macaroni were sold, or to see if some favorite food outsold all other less popular foods, resulting in leftovers.

From these records, then, the manager can record on the food inventory the amounts received and used each week. Our food inventory serves as a weekly-monthly stock sheet. At the top of the right-hand corner is a space to list the cash value of the food, the cash value of cleaning supplies and other nonfood items, and the total cash value. There are 13 columns on this inventory stock sheet as follows: item, unit cost, balance at end of previous month, four columns for total amount used each week for four weeks, a balance column for amount left at end of the month, and a column for the cash value of the food.

Monthly Counts

At the end of the month we do an actual count of our items. This should agree with the figure we get when we add to the previous month's balance the amounts received during the four weeks, and subtract from this figure the amounts we have used during the four weeks.

We use these forms for certain monthly and yearly figures too. We reserve the first column for the year's total, and the remaining columns for each month of the school year, disregarding the original headings. Each month the managers enter on this tally sheet the total amount used of each item

on the food inventory. At the end of the year these are totaled, giving us a complete record of the amounts of each item used during the school year. We also use these forms at the end of the school year, again disregarding the original headings. We record by items:

1. The total amount used.
2. The total amount on hand at the end of the school year.
3. The total amount needed for the next school year.

With these figures I have a complete set of information about the food in each school for the week, the month, the current year, and the amount needed in the year ahead. We list the lowest and highest price paid for each item during the year, and from which firm purchased. We have a quick, handy reference for any price offered, without having to refer to the invoices of the individual firms.

Each month an operating statement

for the department as a whole and each cafeteria as a unit is sent to the board of education. The first page is a summary sheet. The next page shows for the department and each school, the total receipts, cost of food, gross profit, and total expenses. These include general expenses, salaries and depreciation. One to three percent of the gross income of each school is charged each month for depreciation, depending on the size of the school.

SM-12D

65 YEARS OLD-

Sexton

offices

A Quality Unmatched

Perfect Service

Savings that are Exclusive

with Sexton

Many Items Prepared to

Your Individual Needs

Made in Sexton

Canadian Products

JOHN Sexton & co.

Whitey's Road Fresh

GOLDMITH'S DEPARTMENT STORE
Memphis

TAUNTON HIGH SCHOOL
Taunton, Massachusetts

BIRCH BROOK INN
Bronxville

HARTHSTONE OUTPOST INN
Bridgewater, Connecticut

TACHT CLUB
St. Petersburg, Florida

HOTEL JEROME—NEW GRILL
Aspen, Colorado

GRAEMERS HOTEL
Chicago, Illinois

PHI GAMMA DELTA
Lowell, Pennsylvania

TURF GRILL
Galveston, Texas

STADIUM LUNCHEONETTE
Bronx, New York

THE TAVERN
Lancaster, New Hampshire

PLEASANT VIEW LUTHERAN HOME
Ottawa, Illinois

QUAKER DINER, INC.
Philadelphia, Pennsylvania

WHITETT'S FINEST FOODS
Colombia City, Illinois

MANITO GOLF & COUNTRY CLUB
Spokane, Washington

TINKER FIELD CAFETERIA
Oklahoma City, Oklahoma

BROOKLYN HOME FOR CHILDREN
Bronx, New York

Simplified Records Pay Dividends

(Continued from page 15)

and on the net profit or loss it had.

The third page gives the same information on a cumulative basis. The last page gives breakdowns of the operation showing the following items: receipts, food cost, total salaries, kitchen salaries, managers' salaries, administrative salaries, general expense, depreciation, and profit or loss. It

also shows the number of days' receipts received, number of days' labor, cost of the labor per day, and total number served. Beside each figure on this page is a percentage figure. Figures can be very confusing and also very misleading as well as difficult to compare. But when a percentage figure is placed by each figure,

a very simple picture is shown at once and a comparison is easy to make at a glance.

Our work sheets used to make this report are simple too. At the top of the page are shown the receipts. Next the cash value of the inventory at the beginning of the month is added to the remaining items to give the food cost. The food cost subtracted from the receipts gives the gross profit. The general expense, salaries, and de-

preciation totaled give the complete expenses. The total expenses subtracted from the gross profit give the net profit or loss.

Bills for each cafeteria are recorded both by firms and by items. The items are as follows: meat, milk, ice-cream, butter, eggs, and cheese, bread, fresh fruits and vegetables, canned goods and staples, candy, interschool bills, discount, cleaning supplies, paper goods, laundry, postage, telephone, gasoline, miscellaneous, and administrative, managers', and kitchen salaries. This breakdown gives us the amount of money spent for each of the various classifications of foods and other expenses. A similar record shows the amount paid each firm.

New equipment, repairs, and replacements are also paid by the cafeteria department but are not charged on the monthly operating statement. These costs are recorded each month for each school, and at the end of the year a recap is made and the total is charged to each school.

Comparison of Records

A monthly report is sent to each manager for the schools she supervises. This shows the costs and percentages for the whole department and for each of her schools. In this way she can compare her record with the department average.

The bills are checked and ok'd by the managers each week and then sent to the cafeteria office. Here they are rechecked and totals made for each firm. Vouchers are then made in triplicate. One goes to the dealer, one is retained by the clerk's office at the board of education, and one is retained by the cafeteria office. A copy of each invoice is attached to the voucher for the clerk's office and our office. The dealer receives a single check to cover amount due him from all schools, but the amount paid for each school is shown on the voucher.

Our bills are paid twice a month to take advantage of all possible discounts, and to keep a high credit standing with the firms with which we do business. This is worth while. The dealers, knowing we pay our bills promptly, often give us a better price than if we paid monthly.

On Thursday, each manager sends in her pay roll for that week, and the employees are paid the next Tuesday for the previous week.

We have a physical inventory form which contains all the items of equipment for all the cafeterias. Items are grouped in the following classifications: Aluminum Books China Earthenware Enamelware Glassware Equipment—(Stationary) Furniture—Dining Room, Kitchen, Office, Restroom Iron Linen Metal and Tin Silverware Stainless Steel—Cutlery, Bowls, and Pans Wood

The inventories are taken twice a year, between semesters in January and at the end of the school year in June. The first six columns provide space to list amount on hand, amount lost since last inventory, and the amount needed to bring the inventory back to normal. Next is listed the name of the article, its identifying number, a description such as outside top diameter, capacity, brand, and size. The last two columns

...ONE OF THE BEST WAYS TO LOWER OPERATION COSTS—

is to eliminate unnecessary food waste by serving meals that are consistently flavorful. Today hundreds of institutions are depending upon economical Maggi's Granulated Bouillon Cubes to bring new appetizing goodness to their soups, stews, gravies and the many other dishes that call for meat stock. Try adding several tablespoons of this flavor-rich Maggi's Granulated Bouillon to all your everyday recipes—also remember, it makes a delicious instant-quick "broth".

2 OTHER MAGGI FLAVOR FAVORITES

- Maggi's Seasoning
- Maggi's Gravy Powder, Chef Style

BRINGS FLAVOR TO BUDGET MENUS!



SM-13D

Back Again BETTER THAN EVER

THE FAMOUS VIKING INDESTRUCTIBLE



• It's the original patented steel folding chair... the chair that was named INDESTRUCTIBLE! Thousands of these rugged—yet comfortable—chairs are still like new after years of use and abuse! The all-steel VIKING INDESTRUCTIBLE No. 900 Steel Folding Chair is available in either Java, Brown or Dawn Gray. Clamps available for grouping the chairs in sections. Order now!

WRITE for prices, literature and name of nearest dealer.

Only chair made with full back rest—provides strength, comfort, safety.

Heavy channel steel frame and heavy gauge furniture steel seat and back.

Opens or closes in a second, with one hand. Can't bind or stick. Folds flat to 1 1/8" thin—stands 75 or 100 high without tipping.

Generous-size hand grip, easy to carry 3 or 4 chairs in one hand.

MAPLE CITY STAMPING CO.

714 PARK AVE., PEORIA, ILLINOIS



SM-15D

FLOUR CITY BRUSHES

SWEET BETTER
LAST LONGER



RUGGED workmanlike construction of these hand cement-set floor brushes plus superior sweeping efficiency reduces your daily cleaning costs.

Available in widths from 12" to 42", every brush is backed by 35 years of brush making experience.

AVAILABLE IN
FIBRE, HAIR, NYLON OR CHINESE BRISTLE

SEE YOUR SCHOOL SUPPLY JOBBER TODAY!

FLOUR CITY BRUSH CO.

307 5th Ave. So.

Minneapolis 15, Minn.

PACIFIC COAST BRUSH CO. Los Angeles 21, Calif.

show unit and total cost of the items. At the end of each classification of items there is a space for total cost and percent of yearly depreciation.

Our inventories have all been based on cost price. However, I am trying to work out a plan to change this figure to replacement costs. Except two, our cafeterias are many years old and the cost price listed for some of the equipment, especially the heavy equipment, is, of course, very much less than today's costs. For china, glassware, and silverware we have duplicate listings, one for items on hand, and one for items received during the year, since these items are purchased more frequently than others.

Analysis of Repair Costs

We also have an equipment purchase and repair record sheet, Form 3, which is of value in determining exactly how many repairs a given piece of equipment has needed. For example, one refrigerator unit required, in two years, repairs costing almost half the cost of a new unit. When the next repair was needed the cost was almost a fourth of the cost of a new one. When this repair cost was added to the other repair costs, it was easy to see it was good business to buy a new refrigerator instead of trying to make a new one by replacing worn parts one by one.

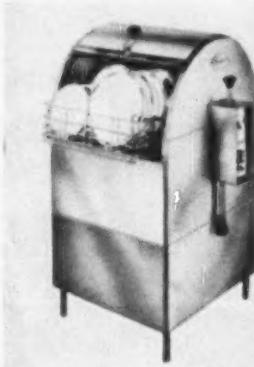
All the record forms we use originated in the department. They are changed from time to time to meet new conditions, and to do everything the easiest and simplest way.

Records are of value only if they are used, and if they are kept correctly and accurately. Do not continue to keep those you no longer use. Do not keep any records just because they have always been kept. Streamline and simplify your records to show only what you need to know; they will pay dividends. We know because our records do just that. Yours can do the same for you.

We regret that no sample forms of these records can be sent to our readers.

NEW CAFETERIA EQUIPMENT

Use the SCHOOL MANAGEMENT Readers' Service Listing on page 29 and the postcard. Indicate key number of products about which you wish to receive further information.



Automatic Dishwasher **SM-418D**
Excellent for small cafeteria kitchens or counter use is the versatile, new Hydra-Spray automatic dishwasher made by the Castalloy Company, Inc. This economical machine requires but one motion to operate the entire wash-rinse cycle. The double doors permit fast, slide-through

operation. Three 16 x 16-inch, hard chrome finish dish racks are included. There is a 1/3 hp, 110-115 volt, AC-DC motor. This streamlined, stainless steel machine is easily cleaned.

Knife Sharpener

SM-419D

Butcher sharp knife edges may be easily and safely obtained with the new Syncro electric hone sharpener. Because of its electric honing action, it will not burn blades nor grind them away. It is ex-

cellent for garden tools, cleavers, scrapers, plane blades, drills, and other tools, also.

Current requirement is any 110-120 volt, AC outlet. Sharpener measures 6 x 7 x 5 inches and comes complete with cord, plug, and 3 interchangeable honing stones.

Dishwasher Detergent

SM-420D

A superior job of washing china, glasses, silver, aluminum, and plasticware is done

by Chat, a new, liquid organic detergent for mechanical dishwashing. The non-soaping Chat cleans and sanitizes at the same time. It contains Dry-A-Pon. This ingredient lowers surface tension of water and causes it to drain off tableware in sheets instead of droplets. This prevents water-spotting. Only 1/2 ounce or less is needed for one gallon of water. Parker D. Perry Incorporated distributes this detergent in 5-gallon cans, and 29 and 55-gallon drums.

SM-16D



"Wait, John Alden . . . something is missing!"

The little modern "Priscilla," casting a practiced eye over the food gathered for the Thanksgiving feast, was appalled to note that the meal was not complete. For example, she saw no bread, flour or cereal, one of the basic 7 food groups needed in daily diets.

A page from American history? Well, not strictly speaking. This classroom skit was more than an attempt to dramatize history; it was also a project in nutrition. With foods prepared for them in the school lunchroom, the children were using the framework of the Thanksgiving story to point up an important lesson in eating habits. The vital study of nutrition was being integrated with other important classroom subjects. The teacher did not need to allot special time for it.

Suggestions for incorporating a Thanksgiving theme and nutrition project into regular classroom studies are at the right. Use them as starting points for ideas of your own. For further assistance in introducing and maintaining nutrition study, take advantage of General Mills "Program of Assistance in Nutrition and Health Education." Plans, ideas and materials—adaptable to any curriculum—are available through the program. For further information write Education Section, Dept. of Public Services, General Mills, Inc., Minneapolis 1, Minn.

SUGGESTED STUDY

Reading:

Stories about the Plymouth Colony

History:

First Thanksgiving

Customs of the Pilgrims

1. How they dressed

2. What they ate

Social Sciences:

Colony Cooperation

Relations with Indians

Arithmetic:

Amounts of various foods necessary for a Thanksgiving Dinner

Art:

Props and costumes for skit; cut-outs of Thanksgiving food when actual foods are not available.

General Mills

Flour • Baking Powder • Biscuit Mixes • Animal Feeds
Home Appliances • Pet Food Products

24 SHORT CUTS THAT WILL HELP TO REDUCE STORAGE LOSSES

By ERNEST W. FAIR

MANY school superintendents who have survived a number of years of business experience have become adept at keeping loss factors out of their operations.

A number of veteran superintendents say that losses in the storage department may be particularly high in small operations where storage is looked upon as just another inconvenience.

Here are twenty-four short cuts being used today by school systems, large and small, which have given attention to this factor.

1. Use storage space that provides the maximum efficiency. Far too many school systems select the "most useless corner" as the storage spot. A spot well selected to provide maximum efficiency in operation is most important.

2. Make certain everything is accessible. Every item in storage should be stocked so that it can be reached immediately. Delays cost money, help create

other costly factors such as breakage and damage.

3. Every storage setup should be flexible. It is sometimes difficult to anticipate any long-range, storage needs. Therefore any storage plan which is completely flexible is better than a stop-gap space or system.

4. Store so that counting is easy. Inventory control costs jump sky-high when storage has been so haphazard as to make the job a long and tedious procedure. Counting is also necessary at times other than during inventory periods—in planning new orders, controlling stock for immediate use, and so on.

5. Keep piles regular and uniform. Everything should be piled in regular and uniform stacks whenever possible. This prevents damage in storage, facilitates counting, reduces loss factors, and lends itself to easier good-housekeeping practices.

6. Handling costs should be kept at

the very minimum. Items in storage, which must be moved about constantly before being put to use, are expensive to store. When an item can be set into its niche on arrival and left there until use, its storage costs are kept very low.

7. Reduce exposure to weather or the elements as much as possible. Even on inside storage, weather damage is possible in some cases through improper ventilation, a window left open during a rainstorm, or overexposure to heat.

8. Provide dividing spaces between items. Dumping goods side by side makes accessibility of any one item a difficult job.

9. Place units so that labels are visible. One of the most prevalent signs of unsatisfactory storage procedure is to find a storeroom loaded with boxes and containers whose labels are hidden or which are not even labeled. This point should be checked each time a new container is placed in the storeroom.

10. Keep the order of piling and removing uniform, for smooth and neat operation of the storage procedure. Helter-skelter piling is a sure way to damage goods in storage. Neatness and uniformity eliminate damage losses, accelerate control, and facilitate removal when it must be done speedily.

11. Keep old stock to the front; use it up first. The practice of using from a section and then stacking new arrivals in front of the remainder of old stock is seldom good procedure, for very obvious reasons. The first method is advisable even when the arrival of new stock requires complete rearrangement of the old.

12. Standardize all equipment used in the storage room, such as shelving and bins. This facilitates rearrangement for changing conditions and arrival of entirely new items. It lends itself to easier maintenance and upkeep.

13. Plan storage for compactness and ease of handling of stored goods. Compactness utilizes available space to the maximum. It helps to keep down hazards brought about through accumulation of waste and debris around sloppily piled goods.

14. Make certain that all storage bins, shelves, and so on, lend themselves to easy expansion, have proper strength and high salvage values. The purchase of any such equipment should not be made until a complete study of future expansion has been taken into consideration and you are assured that such equipment can handle the additional storage problems involved.

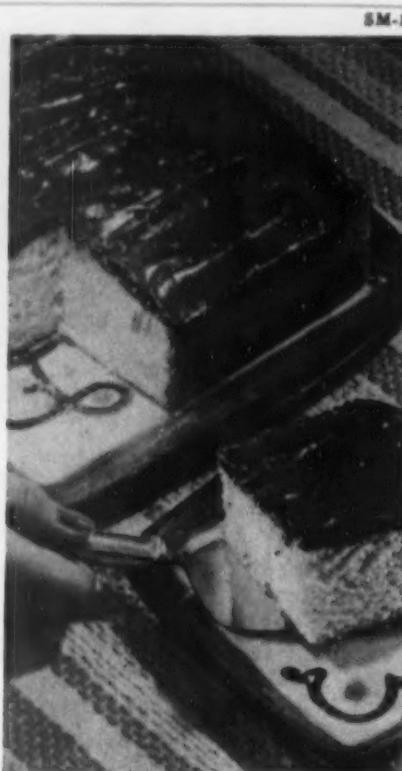
SLICE LABOR COSTS and SERVE THE BEST with

Downyflake CAKE MIXES
5 KINDS 5 WAYS BETTER

- WHITE CAKE
- YELLOW CAKE
- DEVILS FOOD CAKE
- SPICE CAKE
- GINGER BREAD

1. Each Downyflake cake mix produces perfect cakes, well rounded, well formed.
2. These cakes all cut beautifully, hold together.
3. The texture is always even with a velvety crumb.
4. Downyflake cakes are always tender and light.
5. Stay moist and fresh. And at a low cost!

DOWNYFLAKE BAKING MIX DIV.
Doughnut Corp. of America, 393 Seventh Ave., N.Y. 1, N.Y.



8M-17D

How CLEANLINESS is AUTOMATIC with BB WASTE RECEPTACLES

● Everybody is automatically a member of your cleaning department by conveniently placing Bennett BB Waste Receptacles to invite their use. These waste receptacles are sanitary, economical and a major help to cleanliness and neatness. Put them to work for you today.

ONLY BB WASTE RECEPTACLES HAVE ALL THESE FEATURES

- Non-rusting stainless steel feet eliminate rusting and rust marks
- Made of extra heavy-gauge Mayari R, Bethlehem's corrosion resistant steel
- All-welded construction
- Smooth exterior surface...nothing to catch and tear clothes
- Reinforced corners
- Strong springs keep doors closed providing greater sanitation and eliminating fire hazards
- Rounded corners for structural strength and pleasing appearance
- Baked enamel finish...white or green

These are a few of the many features that make Bennett BB Waste Receptacles a natural "buy." Quality is every consideration for hard usage are self-evident both inside and outside of these receptacles.

Write for fully-illustrated catalog TODAY.



THE BENNETT MANUFACTURING CO., ALDEN, N.Y.

CUSTOM METAL CRAFTSMEN SINCE 1904

15. Take maximum precautions for safety in storage. This applies not only toward storage in such a manner as to eliminate collapse of piles, but also toward eliminating any possible physical injury to employees engaged in handling stored goods.

16. Have your insurance agent check your storage procedures and facilities regularly. Fire is one of the most prevalent causes of loss in storage. Every fire insurance company has information on proper storage for its policyholders. Many companies have individual practices which must be followed if insurance coverage is to be obtainable.

17. Provide fire-fighting apparatus for every part and section of the storeroom. If a sprinkler system is not feasible, then fire extinguishers should be in sufficient quantity and so placed that one is always readily available from any part of the storeroom. Heavy losses can be sustained during the brief interval it takes a man to get from a far corner to the front spot where fire extinguishers are all too frequently placed.

Guard Against Vermin

18. Guard against vermin of all kinds in the storeroom. Good housekeeping is the best practice to follow. Sealing all cracks in walls, floor, and ceiling and eliminating damp conditions in the storeroom help. Once vermin are noted they must be exterminated immediately. Delay is always very costly and expensive.

19. Cleanliness is a must in all storage. Not only is it needed to preserve the condition of stored goods, but it is helpful in eliminating fire hazards, reducing accidents, and in pest and vermin control.

20. Keep goods off floors, away from walls, and free of ceilings wherever possible. Runners for floor storage are inexpensive and easily made. Their cost is insignificant when compared to the savings through elimination of damaged goods and increased ease of handling that they make possible.

21. Keep aisles wide enough to accommodate handling of stored goods. Attempting to secure more storage space by squeezing aisles between stacks is generally bad procedure. One of the most often neglected points is failure to make certain that there is plenty of room around corners for easy handling in the storeroom. Most accidents occur at this point. So do greatest losses from collapsed piles.

Have Inspection Area

22. Provide an area for unpacking, inspection, and temporary storage within the storeroom itself. This helps in the reduction of waste, and greatly facilitates checking of goods before they are removed from storage.

23. Oily rags and other substances subject to spontaneous combustion must never be allowed to accumulate. Closed metal containers should be available for such combustible material. These containers should be placed away from walls and stored piles of goods.

24. Goods easily subject to damage should always be stored in containers, preferably those in which they were shipped from jobbers or factories.

A BILITY to teach should be emphasized more, according to teachers at the University of Illinois College of Education.

A resolution urging that teaching success be considered along with other factors in granting promotions and salary increases was passed at a faculty meeting. It is intended to guide a faculty committee which has the responsibility for making advancement recommendations.

The faculty pointed out that teaching ability is often overlooked as a criterion,

while other factors such as research, book-writing, and educational organization activity are considered.

STATE superintendents of public instruction will no longer be elected in Texas, since a recent law dissolved the appointed nine-member state board of education and the present state department of education.

A 21-member board is to be elected which will appoint the state commissioner.

National Essay Contest

HIGH-SCHOOL boys and girls throughout the country have a chance to win from \$5 to \$500 this year in the 1949-50 National Essay Contest sponsored by the Advertising Federation of America. Subject of the essay is "An America Without Advertising." Length should not exceed 1,000 words.

Local contests will be conducted by

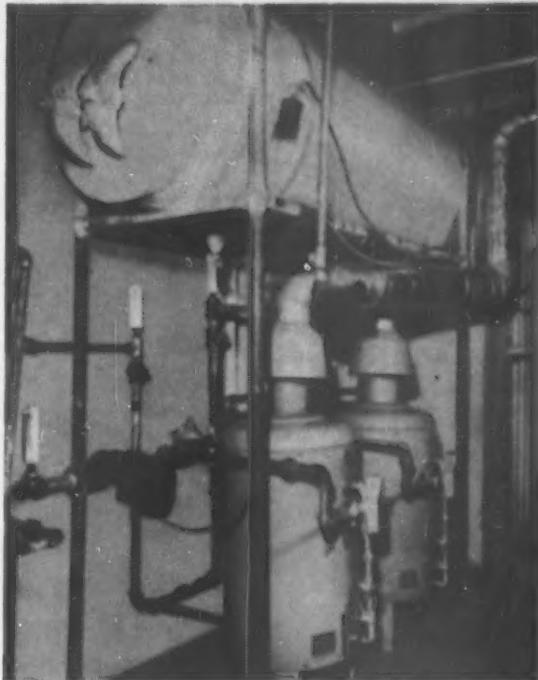
local advertising clubs first, and winners will then be entered in the national contest. National winners will receive prizes at the Federation's annual convention next June.

The committee of six judges for the national contest includes Dr. John W. Stadelaker, formerly United States Commissioner of Education. The contest has been approved by the National Association of Secondary-School Principals.

SM-19D

WATER HEATING

Hot Water
for
Cafeteria and
Athletic Department
supplied by
SINGLE GAS SYSTEM



GAS Water Heating System which supplies hot water to main building

PEAK DEMANDS or off-peak loads never affect the supply of even-temperature hot water from the automatic GAS system in Central College's Main Building. Though the uses vary widely—for showers, washrooms, cafeteria dishwasher—and reach a peak of 200 gallons-per-hour, the flexible GAS Water Heating System fulfills all the requirements.

The installation at Central College is designed for a faculty and student body of less than 600. But it typifies the simplicity of equipment, and economy of operation, found in accurately-sized GAS Water Heating Systems.

Actually, volume water heating with GAS is the ideal method for any school, college, hospital, or institutional needs. Compact, efficient, automatic GAS Water Heating Systems are available in sizes for every volume water heating demand. Your Gas Company Representative will analyze your requirements—call him soon.



Central College in Iowa, Pella, Iowa

Photos courtesy of A. O. Smith Corp., Milwaukee, Wis., of SMITHWAY-BURKAY GAS Water Heaters

AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

Danger in Loyalty Oaths

Do teacher purges, required loyalty oaths, and textbook censorship prove a sturdy confidence in the democratic tradition of freedom, or do they betray a failure of nerve at a critical time in our history?

Dr. John S. Brubacher, University of Illinois visiting professor from Yale, asked this question recently at the University of Illinois.

Minimizing "all the frenzied hysteria over communist teachers," the speaker said he knew of less than a dozen cases of teachers with proved communist connections as reported through the press, radio, or professional magazines.

A more serious threat to free institutions is the intimidation which the communist scare exerts over the teacher with only average or less than average courage, he said. "The danger to them is not so much that they will agree with un-

orthodox views as that they will lie frightened into having no opinions at all."

In protesting the exaction of loyalty oaths from teachers Professor Brubacher observed, "We should have long since realized that a person who is not loyal or who wavers in his loyalty cannot be made loyal by pronouncing an oath of loyalty. We should know that to declare loyalty when one does not feel loyalty or act loyally but breeds the worst kind of hypocrisy."

SM-20D

The Forty-Eight State School Systems

(Continued from page 3)

features and some states than in others.

Differences stand out sharply. For example, a single state board of education is found in some states, several educational boards of one kind and another in others, and no state board at all in a few states. Local educational administrative districts range from fewer than 100 in six states to more than 5,000 in each of seven states. Methods of selecting local superintendents of schools vary widely, including popular election, appointment by local school boards, and appointment by state educational authorities. The average amount of money available per pupil for current educational expense in the "highest state" is nearly four times that in the "lowest state" and the average in all the highest states twice that in all the lowest.

Teacher Education Varies

Wide differences appear also in the education of teachers. The proportion of those with less than two years of collegiate work ranges all the way from none in two states to 51 percent in one state and 30 percent in several states. The proportion of teachers with the master's or higher degree ranges from 52 percent to less than five percent. Salaries of teachers range from more than \$3,400 to less than \$1,300. Two states have annual salaries below \$1,500 for more than half their teachers, principals, and superintendents; while in three states none of these is paid less than \$2,400.

The value of school property per pupil ranged from \$600 in seven states to less than \$200 in four; and the annual expenditure for textbooks and other instructional materials per pupil ranged from \$8 to \$2.

The total educational cost borne by one state was less than four percent, while two states bore 84 percent. These and other striking differences in public educational provisions call sharp attention to wide variations in educational practices.

But the picture is not altogether ugly. Underneath these differences, says the report, "lies a solid stratum of common concern manifested in more or less similar policies and practices. All states now attempt to provide a minimum of 12 years of schooling at public expense. . . . All states, likewise, attempt to assure that the educational opportunities available in all parts of the state shall meet certain standards. All states make some attempt to equalize the burden of school support among the local units. When these similarities are examined in detail, they are found to be even more marked than the disparities which first meet the eye. Underlying the similarities is a common tradition and the acceptance of a common purpose."

There Are Six Essentials

The report then sets out six essentials for the sound administration and operation of state school systems. These are:

1. Getting and studying the facts about the schools.
2. A state policy-making educational agency through which the will of the people may be voiced.
3. Improved local administration.
4. High quality in professional leadership in both local and state agencies.
5. Better teachers.
6. Sound methods of financing education so that adequate educational opportunities may be brought to all the people.

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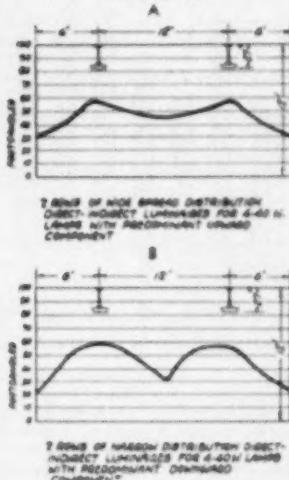
Lighting Techniques

(Continued from page 4)

recommendations for proper light distribution. For example, the luminaires used in Figure 2 (A) will allow a spacing of 1.2 times the mounting height, while the luminaires in Figure 5 (B) allow a spacing equal only to the mounting height.

It can be seen from these examples that two rows of luminaires with a wide distribution will be satisfactory in a room 24 feet wide. However, if the luminaire distribution is narrow, or if the room is wider than this, three rows of luminaires should be used to meet the requirement of uniform distribution.

FIGURE 2



The angle of which light spreads from a luminaire and the amount of upward light varies with different types. Ratio of mounting space to ceiling height must come with manufacturer's recommendations or undesirable dark spaces appear between rows.

In a typical distribution of light lengthwise in the room using continuous-row luminaires, it should be noted that one continuous row of luminaires provides maximum illumination at the center of the room which drops off gradually toward the ends of the room. This lengthwise distribution can be made more uniform by dividing the continuous row into two groups of three luminaires each. This arrangement places luminaires closer to the ends of the room and thus provides more light on the chalkboard at the front.

Direct and reflected glare, the worst enemies of comfortable seeing, are caused by improper brightness control and distribution. Thus the comfort of a lighting system can be expressed in terms of brightness and brightness ratios in the field of view. Values of brightness are expressed in foot-lamberts, the unit of brightness equivalent to the foot-candles on a surface times the reflection or transmission factor. Thus brightness of a surface can be increased by increasing its reflection factor as well as by increasing the illumination falling upon it. Brightness ratios can be improved materially if reflection factors conform with the values recommended in Table I.

TABLE I

RECOMMENDED REFLECTION FACTORS

Room Surface	Reflection Factor
Ceiling	80-85%
Walls	50-60
Desk Tops	25-50
Floor	15-30

In the normal field of vision, ratio of brightness between luminaire and adjacent surface should be limited to 3 to 1, but ratios in the order of 10 to 1 are con-

sidered satisfactory and are generally more practical to obtain. Ratios approaching 100 to 1 cause annoying glare and should be avoided. It is particularly important to control brightness ratios between adjacent surfaces in the direct field of view, such as between a writing pad on the desk and the desk top, or between the chalkboard and the wall adjacent. This ratio should preferably be less than 3 to 1 for comfortable seeing.

Another source of high brightness or

direct glare is high sky brightness, direct sunlight, or bright buildings seen through the windows in the out-of-door field of view. Windows should, therefore, be equipped with some form of brightness control medium such as pull-down shades, or special shielding devices.

The lighting plans shown in Figure 1 on page 4 cover a wide range of costs from the standpoint of initial investment. Several of these plans will not provide the recommended minimum of 30 foot-

candles but are included in recognition of the cost problem created by limited available public funds for school building purposes. Plan A requires a minimum initial investment and each successive plan from A to F shows a higher initial cost.

However, initial cost is a false means of comparison, because it represents only a part of the over-all cost of lighting. In a true cost comparison, investment costs are amortized over a period of years representing the anticipated life of the in-

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Modern Lighting Techniques for Schools

(Continued from page 21)

stallation. Together with interest and insurance costs, these costs are referred to as fixed charges. Annual cost of maintenance — renewing lamps and cleaning fixtures — must also be included. And, finally, the annual cost of the power required by the installation must be added to the fixed charges and maintenance cost. The sum of these costs is the annual

lighting cost. It gives a more complete and truer picture of the relative economics of the lighting systems being prepared.

Figure 3 shows relative true or annual costs of these various lighting systems. It should be noted that these costs are based upon a 15-year amortization period and an assumed power rate of 2½ cents per kilowatt hour with 600 hours opera-

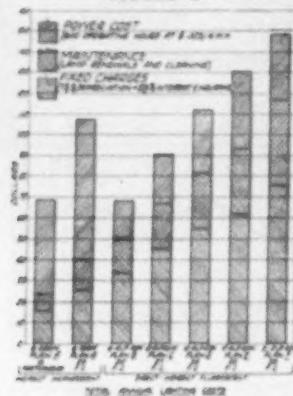
tion per year. All wiring and installation costs were estimated on the basis of installation in new buildings. It is not feasible to compare relighting costs in a typical analysis since there are too many variables dependent upon existing facilities.

The annual cost of each lighting system has been broken down into three component parts to show the relative fixed charges, maintenance, and power cost. It is evident from this comparison that, for

the assumed conditions, fluorescent lighting is the only method by which the required 30 foot-candles illumination can be obtained economically.

Six 750-watt incandescent indirect luminaires provide only 23 foot-candles and cost more than a 27-foot-candle installation of eight fluorescent luminaires (Plan C). Furthermore, the incandescent installation would be characterized by high converted and radiant heat and a ceiling brightness that might be glaring.

FIGURE 3



Complete annual costs of different plans shown in Fig. 1 reflect higher efficiency of fluorescent light sources over incandescent

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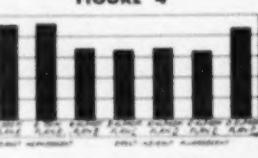
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FIGURE 4



This chart of the annual cost per foot-candle for each of the six plans shows even greater differences from the costs in Figure 2 than those of Figure 3 and presents the fairest picture of what is actually bought with a dollar that is invested in lighting.

It should be recognized that the relative economy of incandescent versus fluorescent lighting depends to a large extent upon the power rate. At very low power rates, the economic advantage of fluorescent lighting is reduced. At high rates, economies shown by fluorescent lighting become even greater than indicated by the typical cost analysis.

No single lighting plan is best for all classrooms. However, one of the six basic plans, as shown or modified, will be found to satisfy practically any case.

To ensure satisfactory distribution, the maximum spacing-mounting height ratio of luminaires should not be exceeded. Illumination at the front and rear of the room can be built up by breaking off continuous rows to locate luminaires closer to the walls.

Comfortable lighting will result by selecting luminaires that are well shielded and of low brightness, by using light interior finishes and furnishings, and by controlling daylight.

Three-Way Lighting In Denver Schools

(Continued from page 5)

Light meters showed, however, that daylight did not do the job, and that artificial lighting was necessary. A costly program? Yes. But the Denver board said that the first consideration was the eye-sight of Denver's 50,000 boys and girls.

Installations required, in almost every instance, new branch circuits. In many cases it was necessary to increase the wire size brought to the lighting panels. In some instances, complete rewiring was required.

The job and the money involved looked formidable, for the board knew that in addition to lighting, the dull, scholastic drab that covered the walls of Denver schoolrooms must also go. Children's eyes are better protected by a flatcoat paint than by the high luster browns that were standard in the Denver schools for many years. Furniture and floors, too, must be considered.

The first installation of fluorescent lighting was made in March, 1947. In one school building, various makes of fixtures were installed on an experimental basis. The board, administrative staff, principals, and teachers studied the results and chose what they thought was the best fixture. The next stage was to light one room in each school building. The room that most needed artificial light was selected by the teachers for the one bright spot in that school, a symbol and a promise of the day when the whole building would be lighted. That day has arrived.

The total cost of electrical fixtures in all Denver classrooms will be under \$700,000. Maintenance of the fixtures is carried out by the custodial staff at no extra cost. It is too early to give an accurate estimate of operating expense.

Budgeted Under Maintenance

The cost of painting the walls and refinishing floors and furniture has been carried out under the maintenance budget of the schools which was enlarged to take care of this accelerated program.

Prior to the installation of the new lights, the average artificial lighting in Denver classrooms was that of five foot-candles. Today the Denver schools are maintaining 25 foot-candles in all regular classrooms, while rooms such as those devoted to mechanical drawing and other subjects requiring close eyework have a lighting of 45 foot-candles.

Over-all direction of this program of new light and color is in the hands of Dr. Kenneth E. Oberholzer, superintendent of the Denver public schools, and Mr. Graham R. Miller, assistant superintendent in charge of business management. Installation of the lighting was supervised by William L. Watters, electrical foreman; the redecorating by W. Leroy Everitt, painting foreman; and the refinishing of floors and furniture by Carl H. Schone, supervisor of custodians.

The board of education which authorized this program included William W. Grant, president; Samuel Johnson, vice-president; Mira Scott Frank; Dorothea Kunsmiller; Isadore Samuels; Frank P. Spratlen, Jr.; and Frank A. Taylor.

A Community Adult Education Program

(Continued from page 7)

be wise under certain circumstances for the superintendent to play an inconspicuous role, letting the initiative stem from others, such as the public librarian and other community leaders. As the council forms, officers should be elected, including a secretary, and plans made for subsequent meetings.

The next step is to conduct a survey

to ascertain what needs and interests could be met by providing adult learning activities. The reasons why adults desire to continue learning may be grouped under five general categories:

- To develop interests denied earlier.
- To keep abreast of new developments.

(c) To prepare for vocational advancement.

(d) To develop new interests or self-improvement.

(e) To find diversion in semi-educational recreational pursuits such as hobbies and crafts.

While space prevents giving more detailed suggestions for conducting the survey, the following possibilities may prove helpful to the council and its officers:

(Turn page)

SM-27D



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Freezing as a method of food preservation and storage has found itself a definite niche in homemaking. One and one-quarter million American families have installed Electric Farm and Home Freezers during the past three years. American homemakers have discovered home freezing means a wider variety of fresh foods at all seasons of the year... time saved because of fewer shopping trips... money saved on their food budget by freezing home-grown prod-

ucts or foods purchased in season and frozen while plentiful and low priced.

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Community Adult Education Program

(Continued from page 23)

(a) Formulate an interest inquiry blank as to possible interest in certain classes. This might be circulated to the parents through the pupils, printed in newspapers, and circulated to the membership of the organizations and agencies represented on the council.

(b) Elicit the aid of churches to circulate to their membership.

(c) Analyze results of former adult education programs in the city.

(d) Analyze the results of interest in classes in other communities of similar size and comparability.

(e) Have each council representative conduct a survey of the membership of his own group.

(f) Confer with the director of the

employment bureau to ascertain vocational training needs.

One of these plans, or a combination of them, should provide considerable data on the classes, forums, or learning activities for which there is greatest interest.

Analysis of leadership, talent, and finances is required next. The survey process will indicate fairly clearly what classes, clubs, discussion groups, forums, hobby or recreational groups — call them

what one may — will meet the needs and interests of the people of the community. The task then becomes one of finding suitable leaders and teachers. Normally, the term "leaders" will be found most desirable in adult education.

Members of the council will have helpful ideas on this from the standpoint of volunteer leaders to be used in smaller communities. In a larger community or city, where paid leaders will be used, it is the coordinator's task to seek applicants and select those best qualified.

Necessary finances will need to be considered. Plans for fees, material costs, meeting times, length in weeks of the sessions, and similar matters must be made. These problems will vary considerably from the program in a very small community conducted principally on a volunteer basis, to the larger city with a budget for a paid coordinator and staff, provision for paid leaders or teachers, and a schedule of tuition fees for various types of classes. The size of the community and local conditions, along with consideration of possible state aid, will largely govern the final planning under this step.

Many Factors Affect Cost

The actual cost of initiating a program of adult education is dependent, of course, upon the size of the community, the nature and breadth of the program, and the amount of fees charged for enrollment. Where the district bears the cost of a part or full-time coordinator, the actual cost in a number of smaller communities, outside of the strictly vocational adult program, varies from practically nothing to \$2,500 and up to \$10,000 in one city of 20,000 population.

The superintendent can readily secure the facts on costs from communities comparable to his own in size, or from the state superintendent of public instruction. The costs in larger cities with a director of adult education, a staff, paid teachers, and a broad program of offerings is naturally considerably greater.

The need for a coordinator or executive officer will become readily apparent as step one is completed and step two is undertaken. Perhaps he will need to be available to carry through step two, depending upon the size of the city and the task. It has been purposefully scheduled as step four in order to indicate that council members should have opportunity to participate actively in the thinking and activities suggested under steps two and three.

Director Must Devote Time

The coordinator or director might in smaller communities be a volunteer worker. In progressively larger towns and cities, it is clear that he should be a part or full-time paid executive officer as the program gets underway. In any event, the council, as any other lay body, will not be able to function successfully for very long without a designated executive officer with time to devote to important details.

The superintendent will not have time to perform this task, but he can assign a qualified member of his staff to this duty. This person would serve part-time or full-time, depending on the magnitude of the task to be done. In smaller communities, a qualified person might be found outside the schools with time to devote to the work.

Step five is the organization and scheduling of groups and leaders. This involves making the routine administrative plans and financial arrangements to insure a smoothly operating program. It is likely there may be possible classes or groups for which competent leaders are not available, and the opposite may also be true in some cases.

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It is primarily a task for the coordinator, but he should always keep the council fully informed and draw upon them for ideas, suggestions, and counsel. It is highly important throughout each of the steps to keep the council members actively interested and participating, whether the coordinator is appointed in the early stages or later.

Preparation of leaders is the next step. Before the program is actually launched some preparation for leadership should be given to those chosen, along with some instructions on routine details of organization. This will vary according to the program undertaken and the nature of the administrative and financial factors. These responsibilities will fall largely within the duties of the coordinator.

Have Leaders' Meetings

After the program is in operation, it is desirable to schedule periodic meetings of the leaders for further in-service preparation, discussion of mutual problems, and improvements which can be made in leadership. These meetings have a great potential for interest and for continuous upgrading of individual leaders.

Any program becomes successful only as a result of a continuing process of critical appraisal and intelligent and careful replanning. Hence, this seventh step is in reality never actually completed but it is a continuing process. The council normally should actively participate in a policy-making and advisory manner, based upon facts and information supplied by the coordinator.

Ordinarily it will be found that a well-balanced program of adult education in a sizeable community or city will include offerings in the following categories:

- (a) Home and family living.
- (b) Current national, state and community problems.
- (c) Vocational retraining or job improvement.
- (d) Creative diversion in hobby development and recreation.
- (e) Education for special groups, such as the foreign-born, illiterates, hard-of-hearing, partially-seeing, and similarly physically handicapped.
- (f) Workers' education.
- (g) Education for social and technological changes.

These might be used as guideposts by any council and coordinator in appraisal and further planning with respect to fields served. They should also take into account fully the local conditions and circumstances and other factors in the program.

It should be emphasized that the suggestions outlined above are entirely flexible. Nothing can substitute for the value of intelligent local planning to meet the needs and problems as they actually exist in a given community or city. However, it is hoped they may prove helpful and fruitful to superintendents and school boards, and provocative of other ideas.

The field of adult education holds great challenges and promise in these coming years. It can reap that promise only as more superintendents and boards of education start planning to fulfill their total educational leadership responsibility in the communities and cities they serve.

DAY classes for adults are being offered by the Los Angeles schools this fall. There are classes for persons who wish to learn to read, write, and speak English, to prepare for naturalization examination for citizenship, and to review elementary subjects such as spelling, arithmetic, history, and so forth. Classes for veterans who wish to complete their elementary education are also available.

Adults and Education

PAUL L. ESSERT, professor of education at Teachers College, Columbia, recently estimated after a travel survey of 75 cities in 34 states that 30,000,000 adults are touched by some facet of adult education.

According to Dr. ESSERT, four trends are contributing to this great interest:

1. A constantly increasing adult population.
2. A continuing demand for part-time learning.
3. The growing realization that education is not necessarily completed in the first 20 years of life.
4. The increasing concern of the public schools in guiding young adults as they assume community responsibilities.

One of Dr. ESSERT's proposals to encourage lay and professional leadership in adult education is creation of 5 or 6 demonstration centers in community planning.

FINAL contracts in New York City's \$120,000,000 school construction and modernization program, begun in January 1946, will be let by July 1, 1950, according to a recent announcement by Mayor O'Dwyer.

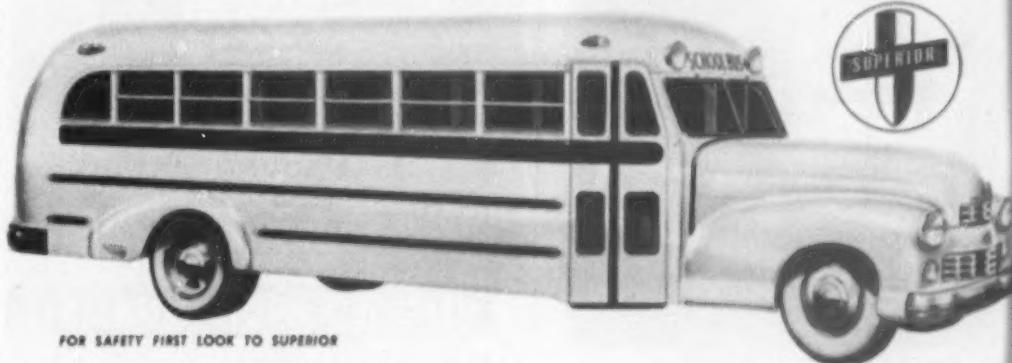
Fifty-eight new buildings will have been constructed when the program is completed, and 77 buildings modernized. The new schools will accommodate 60,560 pupils. For playgrounds, \$300,000 is included in the program.

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The School Print Shop Can Be a Great Ally

STUDENT printers have been the constant ally of all school extra-curricular activities in the Augustus Louis Troup Junior High School, New Haven, Connecticut, since the establishment of the school print shop in 1943.

The linotype machine and presses are kept in constant operation, reports Sam Jaffe in *School Activities*, and all

kinds of material used by several groups is turned out. The "Troup Trumpeter" and an anthology, "Trouplings," both written by the student body and widely recognized, are products of the print shop.

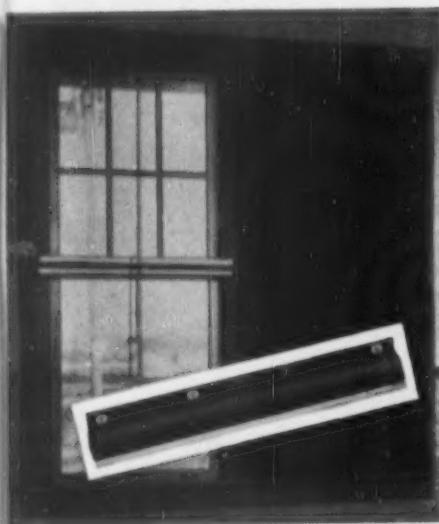
Cards, certificates, invitations, programs, and many other items keep the printing staff constantly challenged

with a heavy load of work to be done. The principal states that he would not be without a print shop in his school. The student-operated shop serves the needs of the school just as a local print shop and newspaper serve the needs of a community.

A school print shop is an excellent starting point for aspiring young printers, remarks Mr. Jaffe. It also gives the students an opportunity to do creative work.

SM-32D

How Many of Your Classrooms Would One Set of Pakfolds Darken?



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The Draper Portable Pakfold can take it — easy to transport from room to room where needed. To apply this darkening shade or remove it, simply lift its supporting pulley from the pulley bracket, by use of the Draper Pulley Fork. No screws to remove — no ladder to climb.

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Pakfolds are practical in all sizes. For large windows of unusual width or length Pakfolds are made with two sets of pulleys and cords.

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Dept. MA11, Spiceland, Indiana

Missouri Plans to Extend Adult Education

THE newly formed Missouri Association for Adult Education is making plans to extend the public school facilities to the entire community. At a recent meeting held in the Jefferson City office of the State Department of Education, committees were established to develop recommendations for necessary classes and facilities for the instruction of adults in desired subjects, chiefly through the use of the public school plant and personnel.

Missouri makes available to the state university, state colleges, the state teachers colleges, and Lincoln University more than \$10,000,000 each year for adult education on the professional level. This money is used to educate adults as lawyers, doctors, teachers, journalists, and in other professions. Wide vocational training on the professional level is provided for, but very little is being done to train adults for the scores of occupations other than the professions.

Twenty-one states now provide state aid to local boards of education for the development of adult education programs. The amount of such aid ranges from \$30,000 per year in Florida to \$4,500,000 in California.

Recommended Legislation

The legislative committee of MAAE is recommending legislation:

1. To authorize local boards of education to provide instruction for adults.
2. To appropriate \$250,000 annually from the general revenue to reimburse local boards for adult education program expenses.
3. To authorize the establishment of area schools.
4. To regulate and license private schools.

The proposed legislation would empower the local boards of education and the state department of education to establish, supervise, and reimburse for actual expenses such courses as would be needed by various communities. The federal government will match, dollar for dollar, the amount provided by the various states where the program has been set up by law.

Officers of the organization are: Tracy E. Hale, assistant commissioner of education and director of vocational education, president; Dr. Sherman Scruggs, president of Lincoln University, vice-president; and E. T. Miller, superintendent of the Hannibal public schools, secretary-treasurer.

MEN and women of adult elementary classes in New York City recently took an all-day citizenship field trip to Washington, D. C. Sponsored and planned by the Adult Students' Council, the tour covered government buildings, historic shrines, Senate Chambers, the House of Representatives, the White House, and many other points of interest. Two special ten-car trains and chartered sight-seeing autos and busses were used.

Most of the 1123 men and women were preparing for citizenship. The tour was the result of their desire to see some of the American shrines they had heard about and discussed in their classes.

DANIEL WEBSTER High School in Tulsa, Oklahoma, offers students special training in library use as final preparation for college. Part of a senior core program, the unit is taught by the school librarian, is designed to give students information on how to look up facts or blocks of subject matter and to give them drill in doing so. . . . *Education Summary*.

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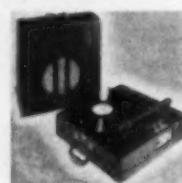
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International Meeting Deals With Educational Problems of Special Cultural Groups

IMPORTANT people in education from more than half the English-speaking countries in the world held a three-week conference at Teachers College, Columbia University. It was sponsored and planned by the college in cooperation with the Council of State Directors of Negro Education, an American organization, and by the Institute of Education of the University of London. It was financed by a grant of approximately \$85,000 from the Carnegie Corporation, Teachers College, and the General Education Board.

The group formed an international meeting on the theme, "Educational Problems of Special Cultural Groups." The distinctive feature of the conference was that intimate round-table talks were held between white and Negro educators from the southern states in this country and from various parts of Africa.

Six Action Groups Formed

The representatives went to work so quickly and worked so hard that most of them forgot to "see" New York. They broke up into six action units an hour after they assembled at the college from many parts of the world. Each unit took a topic—teacher education, community education, rural education, adult education, education for the improvement of intergroup relations, and a unit concerned with "new patterns of administrative leadership in education."

The men and women learned from each other how to solve educational problems in their communities. They didn't try to set down over-all "techniques" for adoption by the group, but brought their individual problems into the open, then discussed a possible solution or heard how a similar problem was solved by a member of the group in his own community. There was a spontaneous give and take of ideas and the exchange of real-life solutions to educational problems of mutual concern and interest.

Dr. Karl W. Bigelow, professor of education at Teachers College and chairman of the college planning committee, stressed that the meeting was not primarily formed to find ways to improve "inter-racial harmony." It was designed, he said, to bring the educational problems of special culture groups into the open and for the conference participants to see how these problems can be solved.

One of the important ways the group worked to solve their problems was through each other—that is, through precedent and from the experiences in a mutual problem by one or several representatives of a conference unit.

Representatives Were United

"The 70 men and women who attended the conference joined hands with one another and were, in a sense, united with all the representatives of mankind who are committed to the idea of finding more food, more health, more housing, more education and greater freedom for human beings," Dr. Bigelow declared.

Special resources, as provided by consultants and lecturers, and films and field trips, proved valuable. Some of the conference members from abroad spent four weeks in a preliminary field study in the southern states; the rest of the participants did their field study later.

In addition to Negro and white school officials from 15 southern states, the following countries were represented at the conference: Northern Rhodesia, Nyasaland, Kenya Colony, Uganda, the Anglo-

Egyptian Sudan, the Union of South Africa, England, the Gold Coast, Nigeria, Sierra Leone and the West Indies.

Participants in the conference were directors of Negro education and their assistants; chief state school officers, and college presidents and deans from 16 states; officers of the supporting and other foundations; British experts in colonial education; and key educators from 12 other nations besides the United States.

TEEN-AGE pupils are working in a community-sponsored effort to build a recreation field for the Cranford, New Jersey, High School. The pupils are tiling with pick and shovel to lay topsoil supplied by local townspeople for the project, reports *The New York Times*.

Work started last fall after a faculty report, prepared by Frank Zimmerman, vice principal, and two of the teachers, urged establishment of play facilities

near the school. The athletic field is a half mile from the school building.

Students in mathematics classes did the preliminary surveys on the property. Industrial arts students received practical training hoeing and grading the land.

Plans call for facilities for tennis, shuffleboard, track, softball, and field and ice hockey. Local residents look upon the plan with favor, and many of them are offering material assistance.

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New Finisher

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Sanding operations are speeded with the new, model DF Detroit Easy finisher. It does straight-line sanding, rubbing, and polishing with a smooth, vibrationless operation. It does not sand hard-to-cover abrasive patterns. Work can be done wet or dry, curved or flat. Sturdy finisher operates up to moldings or right angles without marring or scratching. A new, streamlined rear handle gives comfortable one-hand operation. For jobs

where two hands are needed, a front guide handle can quickly be attached. A simple abrasive-paper holder permits attaching several sheets to finisher at once.

Football Marking Paste SM-401D

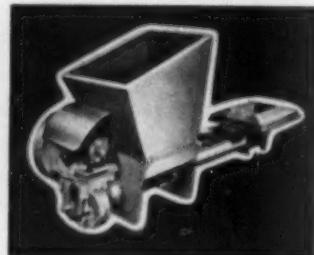
Your athletic field won't lose its football markings for a long time when you use the new Certified Hydall Paste No. 451-F, made by United Laboratories, Inc. It covers the grass blades from the tip to the ground, adheres well, and is unaffected by weather. Grass is not harmed by this material. When thinned with water, paste may be applied by standard marking machines. It will not dust.

Distance Judgment Test SM-402D

Does your school need driver testing equipment but lack funds to purchase it? If so, the simplified, distance judgment test kit was developed especially for you. The test measures ability to line up miniature cars side by side with a fixed car in the center. The person tested looks through holes in a viewer and lines

up the cars by means of strings from a distance of 15 feet.

A complete set of parts for building the test is available. It is one of the first of a series of simplified devices being produced by the American Automobile Association for needs of small schools.



New Stoker

SM-403D

A special device to eliminate the cause of much stoker failure is a part of the

NEW PRODUCTS
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new Brownell Worm-Feed Stoker, "Type F." An oil-level cup gives warning of any water in the gear case due to vapor condensation and other causes.

An exclusive device permits the belt to be shifted easily from one pair of sheave grooves to another for changing speeds. Stoker comes in 7 capacities with 3 styles of rotors. Air volume control can be manual or automatic.

Floor Cleaner

SM-404D

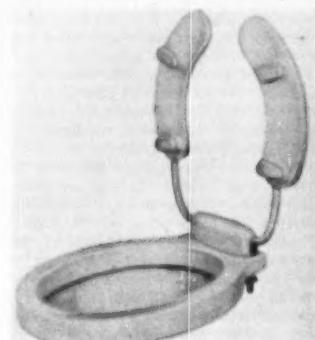
A cleaner that seals as it cleans is Sealit, manufactured by the Franklin Research Company. It is used for nonresilient surface such as marble, terrazzo, slate, and ceramic tile.

Floors treated with Sealit gradually develop a sheen, and dirt and soil tend to remain on the surface where they are easily removed. By its use, many damp moppings and scourings can be eliminated in favor of dry cleanings.

Soap Dispenser

SM-405D

If you are expanding or improving hand-washing facilities, see the Bobrick 44, new lather-type liquid soap dispenser. It is made of highly polished stainless steel and has a shatterproof, translucent container through which the soap level can be seen. The dispensing mechanism is simple, demountable, and easily replaceable. A device furnished with the dispenser makes it possible to attach it to a hard surface wall without screws.



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(Turn to page 30)

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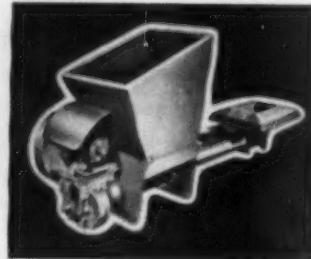
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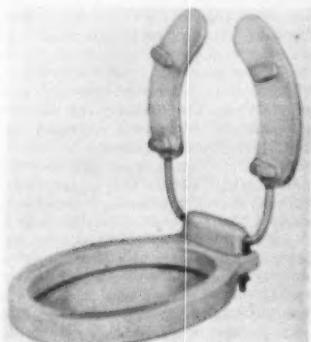
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NEW SCHOOL EQUIPMENT

402D—AAA judgment test
411D—American floor machine
422D—Ansley record player
424D—Aristo grid light
405D—Bobrick soap dispenser
403D—Brownell stoker
407D—Canvas Products shop apron
418D—Castley dishwasher
412D—Cole blueprint cabinet
400D—Detroit finisher
415D—Ditto duplicator
404D—Franklin floor cleaner
414D—Heyer duplicator
410D—Huntington floor machine
408D—Johnson's floor machine
409D—Lawlor floor machine
417D—Miller tree lights
423D—Movie-Mite slide projector
420D—Parker D. Perry detergent
421D—Prestosol splicer
416D—Republic Stamping tree holder
413D—Rex-O-graph duplicator
406D—Speral toilet seat
419D—Syncro sharpener
401D—United Laboratories marking paste

FREE CATALOGS

451D—West Disinfecting Company
452D—Sylvania Electric Products, Inc.
453D—Allied Radio Corporation
455D—General Electric Company
456D—International Business Machines Corporation
457D—Flektite Company, Tile-Tex Division
458D—Kearney & Trecker Corporation, Walker-Turner Division
460D—American Playground Device Company
461D—O'Neill-Irwin Manufacturing Company

TEACHING MATERIALS

475D—Elementary Science Correlation Chart
476D—How to Buy and Care for Your Washables
478D—Soap and Other Detergents
477D—Annotated List of Books for Supplementary Reading

NEW PUBLICATIONS

200D—Planning and Modernizing the School Plant
201D—Elementary Teachers Guide to Free Curriculum Materials
202D—Basketball Coaches Digest for 1949-50
203D—Betty Jean Is Ready for School
204D—Betty Jean Grows Up
205D—Handbook of Day-Camping
206D—Principles of Elementary Education
207D—Primer of Life Adjustment Education for Youth
208D—Elmwood's Youth
209D—The Teacher and School Organization
210D—Career Plays for Young People
211D—Activities in Nutrition Education for Kindergarten Through Sixth Grade
212D—How Well Are Indian Children Educated?
225D—Fundamentals of Aviation
226D—Aviation Education
227D—Folk Songs and Dances of the Americas
228D—Effective Shopping
229D—Shorthand in One Week
230D—How People Work Together: The United Nations and Specialized Agencies

NEW AUDIO-VISUAL AIDS

300D—On Guard
301D—Silver Harvest
302D—Yellowstone-Grand Tetons
303D—Historic Death Valley
304D—Glacier Park-Canadian Rockies
305D—Valley of Triumph
306D—Service Unseen
307D—Describing an Incident
308D—ABC of Pottery Making
309D—Partners
310D—Living Silver
311D—The Story That Couldn't Be Printed
360D—The Flag Is Born
281D—The Flag Develops
352D—How to Honor and Display the Flag
383D—Jack Baloo His Savings
384D—Jack Takes a Trip by Bus
385D—Jack Sees the News Made
386D—Smart Driving
387D—Spending Your Food Dollars
360D—None So Blind
361D—Creating With Clay
358D—Jiro and Hanako of Japan: Home, School, and Church
359D—Jiro and Hanako of Japan: Work and Play
378D—16 mm. Film Catalog
379D—Filmstrip and Slide Catalog
380D—Pictorial Catalog
381D—Westinghouse Sound Motion Pictures and Slide Films-1949
377D—Movies About Oil
378D—1949-1950 School List Catalog
376D—16 mm. Sound Films-1949



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Not since pre-war days have these handy little steel Corner Shields been obtainable. But now, — here they are! Choice of Black or Brown Enamel finishes; need no tools to install in stairway corners; just place them, then PUSH! Can't wait to get your money's worth. Order from your nearest School or Furniture Supply Jobber. If unable to supply you, write for sample and generous trade discount.

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Send for our catalog, listing thousands of wonderful entertainment and educational films—features, shorts, comedies, mysteries, serials, westerns, dramatic, fairy tales, etc. We carry 16 mm. films of schools, churches, institutions, camps, clubs, and others. Send for your copy TODAY. IT'S FREE!

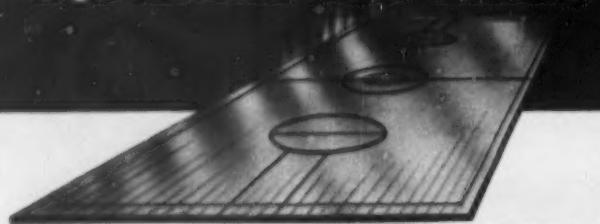
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FOR "FASTER" PLAYS ON SAFER GYM FLOORS

DOLCOROCK imparts a brilliant, glossy finish to your gym floor—like an extra layer of crystal-clear quartz!

Having a high coefficient of friction, DOLCOROCK cuts down "slide"—really makes games "faster" by permitting sudden starts and stops while reducing slipping. That means an extra margin of safety for sports participants. Spectators, too, like DOLCOROCK'S attractive lustre.

Virtually impervious to grease, dirt, ordinary acids and alkalis . . . easy to apply and maintain . . . equally correct for hardwood, cement and magnesite floors.

Write for the comprehensive DOLCE
booklet "Floor Maintenance"

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WESTPORT, CONNECTICUT**

SM-44D



A series of nine full color filament rigs especially designed to fill a need for concrete visual material in elementary schools. Each filament was outlined by teachers, tested in classrooms and revised by teachers and supervisors. Emphasis is on POSITIVE teaching methods.

This series stresses the common, every day situations that most closely affect the average child. It builds the concept that each child is at least partially responsible for his own health and safety, and must cooperate with teachers, parents, youth groups, etc., to keep himself healthy and happy.

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SM-44

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NEW YORK 34, N. Y.

SM-45D

SCHOOL SUPPLIES AND EQUIPMENT

(Continued from page 28)

CP-40 industrial toilet seats come in conventional black as well as white plastic.

Shop Aprons

SM-407D

Sturdy school-shop aprons and instructors' coats are manufactured by Canvas Products Corporation. Aprons are made of strong drill material in a choice of 4 colors and 4 sizes. Crossed back tapes and ring enable further height adjustment. One free apron is supplied by the company for every 12 ordered.

Sanforized instructor's coat has swing pockets, gripper fastener, action back.

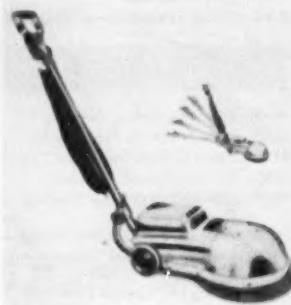


Floor Machine

SM-408D

Every type of floor maintenance job can be handled by the new Johnson's Wax Super 16 polisher-scrubber. With a variety of quick-change accessories it may be used to sand, steel-wool, grind, polish, scrub, and wax floors of all kinds. With a solution tank and shampoo brush, it will also shampoo rugs.

Uniform distribution of weight over brush area of the machine assures smooth operation. Patented finger springs keep machine riding level regardless of the condition of the floor. Power comes from a compact, induction-type, 3/4 hp motor in heavy, aluminum casting.



Floor Machine

SM-409D

Congested areas, filled with desks or other equipment, are sometimes hard to clean properly. S. C. Lawlor Company makes the 12W, a new model floor machine that is ideal for scrubbing, waxing, or polishing such spots. The adjustable handle can be lowered to a completely horizontal position. It can be used stationary, or flexibly regulated to allow free movement within an 80-degree arc.

A large rubber bumper keeps machine from marring furniture. Ball-bearing steel wheels are rubber tired. Brush spread is 12-1/2 inches. Heavy-duty, 1/4 hp motor works on AC or DC.

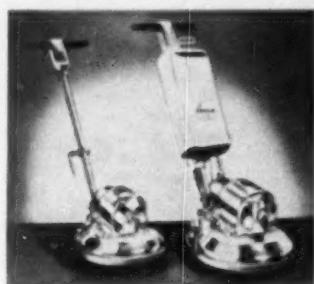


Floor Machine

SM-410D

Low enough to operate under hard-to-move furniture; heavy and powerful enough to do high quality work! That's the new Silent Huntington Low-Hite floor machine. It measures 11 inches from floor to top of the motor housing. It scrubs, buffs, waxes, and steel-wools floors and shampoo rugs.

The Low-Hite has retractable wheels which are up and out of the way when machine is in operation. Other features are a safety grip switch and quiet planetary gear drive. Machine is available in 12 and 16-inch sizes.



Floor Machine

SM-411D

Excellent for dry or wet operations on a great variety of floors is the improved American DeLuxe floor maintenance machine. It comes in new sizes which include a 14-inch brush with 1/3 hp motor and 16-inch brush with 1/2 hp motor. The adjustable handle can be set at any angle through a 90-degree swing, or detached for storage or transportation. It has special, on-off safety features.

Standard equipment includes a tampico brush for general polishing. Also available are palmetto, bassine, and wire bristle brushes for heavy polishing, hard scrubbing, or removal of gumminy or dry dirt accumulations, a sanding disc, steel wool, and buffing or burnishing pads.

Blueprint-Map Cabinet

SM-412D

A 5-drawer cabinet for blueprints, maps, art work, plans, and paper stocks is made by the Cole Steel Equipment Co., Inc. It has smooth-gliding drawers on ball-bearing rollers. Equipment includes a lift-compressor in the front of drawer and a hood in the rear to prevent material filed from curling, creasing, or tearing. Construction is of heavy-gauge furniture steel. These units can be stacked securely. Colors are olive green or gray crinkle finish.

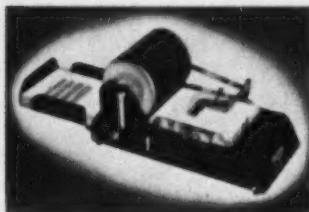
There are two sizes: one with the inside drawer 37 inches wide, 23 inches deep, 2½ inches high; the other with inside drawer 43 inches wide, 32 inches deep, 2½ inches high.



Fluid Duplicator SM-413D

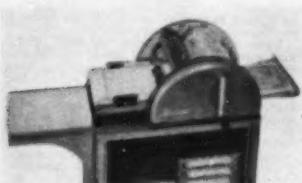
A convenient, new automatic counter is now a part of the Rex-O-graph model SA fluid type duplicator. It consists of a revolving indicator which counts 100 copies in one complete turn. At each revolution of the drum, it moves around the numbered dial and indicates the number of copies produced.

This duplicator has 100 percent roller inscribing and a lightning paper-centering device. A snap-action master clamp, 1/8 inch stripping margin, and need for only one forward turn of the handle per copy are other features which make the machine excellent for general duplicating purposes.



Stencil Duplicator SM-414D

An excellent value is the Heyer Model C stencil duplicator. This is a low-priced machine which produces high-quality work. Clear, sharp copies are delivered at speeds of 100 or more per minute. An automatic paper feed, large capacity feed table, and quick setting guides are other important features. Duplicator handles varied types of jobs from postcards to those on legal size paper.



Liquid Duplicator SM-415D

School duplicating jobs are well handled by the new, low-price model, Ditto D-10 direct process liquid duplicator. In one operation it will reproduce up to 140 copies a minute of anything typed, written, drawn, or printed through duplicating carbon — in up to 4 colors. Copies can be made on a wide range of sizes and weights of paper.

Length of run and brightness of copies are regulated by a simple "magic copy control." A disappearing receiving tray streamlines the machine.

TWO devices which will help avoid Christmas tree fires won honorable mentions from Lewis & Conger of New York City. (The firm annually gives a safety award dinner where

products promoting safety are given special recognition.)

Tree Holder SM-416D
This is a large, green-enamored, all-steel tub with a holding device into which the freshly pointed tree is easily slipped. Three set screws, turned until they bite into the trunk, keep the tree secure. The tub holds 12 quarts of water, sufficient to keep the tree from drying out during the holiday season. Stand will hold a tree up to 9 feet in

height. Maker is Republic Stamping and Enameling Company.

Tree Lights SM-417D
Since there is no exposed material, this product eliminates the danger of flash fires caused by tinsel decorations short-circuiting exposed metal parts of Christmas tree lights. A Plasti-Clip is permanently attached to each lamp socket, sealing top and bottom of the socket against entrance of foreign material. Clip holds lamp socket

securely on tree branch. Maker of this safe, tree-decorating device is Miller Electric Company.

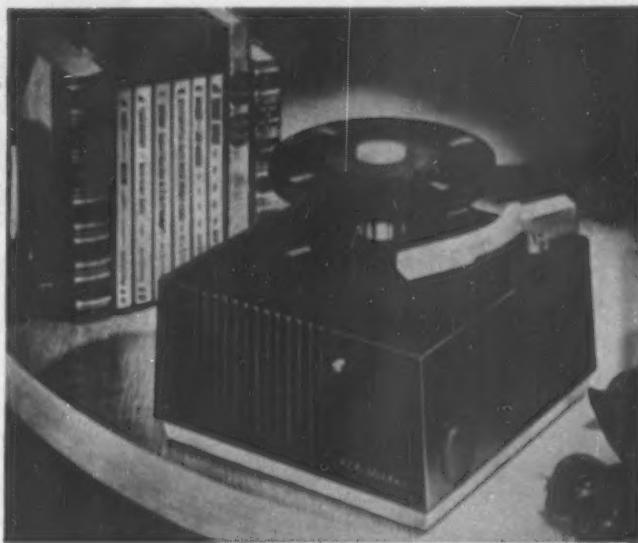
LATEST junior college figures show that there are 651 junior colleges with an enrollment of 500,536 students. Ten years ago there were 536 junior colleges with 155,588 students. Three states take the lead in the number of junior colleges and students. They are California, Texas, and Illinois.

SM-46D

The Complete Player

RCA VICTOR 9-EY-3

This smartly styled RCA Victor phonograph plays the new distortion-free RCA Victor records. It contains the amazing new RCA Victor instantaneous changer — easiest of all changers to operate — plus a built-in speaker and amplifier. This new instrument brings to the classroom the many advantages of the sensational new RCA Victor Record Playing System and the superb performance of the inexpensive RCA Victor 7-inch records. The low price is another big feature of this magnificent new way of enjoying recorded music in the classroom. Over-all dimensions: Height 7½"; Width 9½"; Depth 9½". \$39.95*



The New *RCA VICTOR* 45 r.p.m. Record Playing System

Superb Quality Music Reproduction for the Classroom

Inexpensive attachment RCA VICTOR 9-JY plays through your present radio

This amazingly low-priced model can be easily attached to any phonograph, radio or television combination. It's easy to operate . . . changes records automatically. You hear the beautiful quality of the new RCA Victor 7-inch, distortion-free records reproduced through the instrument to which it is attached. Over-all dimensions: Height 6½"; Width 9½"; Depth 7½". \$24.95*

*Price subject to change without notice.



• A new kind of record — first to be distortion-free over 100% of playing surface.

• 7-inch non-breakable record plays as long as ordinary 12-inch . . . wears much longer.

• COST SAVINGS . . . compare with prices of ordinary records.

• World's fastest record changer . . . plays for more than 50 minutes without touching the record player.

• Easiest, surest record changing mechanism ever designed.

• New "bookcase" albums . . . an end to record storage problems. AC operated.

Send coupon for complete information

EDUCATIONAL SERVICES

RCA VICTOR

DIVISION OF RADIO CORPORATION OF AMERICA, CAMDEN, N. J.

Educational Services (Dept. 81K)
Radio Corporation of America
Camden, N. J.

Please send me additional information on the new RCA Victor 45 r.p.m. Record Playing System.

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School _____

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City _____ State _____

been successful during the last basketball season in this Seal-O-San basketball digest. Among the authors are "Phog" Allen, Cliff Weis, Clair Bee, Bud Foster, Everett Case, B. C. Doolen, and H. Carl Sauer.

CHILD Study Association of America, 211 West 57 St, New York 22, New York, offers two booklets which contain suggestions to help parents in aiding their children to achieve school adjustment. 6 pages each. 10c each. **SM-203D—Betty Jean Is Ready for School.**

SM-204D—Betty Jean Grows Up.

SM-205D—Handbook of Day-Camping. By Mabel Jobe. Association Press, 347 Madison Ave, New York 17, New York. 192 pages. \$1.

Here is a clear analysis of what is meant by a day-camp and how to go about establishing one. Limitations as well as advantages are pointed out. Getting the campers, planning the program, publicity, and legal and financial aspects are all covered. Selecting the staff, equipment and supplies, and numerous other angles are included.

SM-206D—Principles of Elementary Education. By Henry J. Otto. Rinehart and Co, Inc. 232 Madison Ave, New York 16, New York. 430 pages. \$4.

Purpose is to orient the reader to fundamental issues, ideas, and concepts regarding the education of children of elementary school age.

SM-207D—Primer of Life Adjustment Education for Youth. By J. Dan Hull. American Technical Society, Drexel Ave, at 58 St, Chicago, Illinois. 30 pages. Single copy, free; quantities up to 25 copies, 36c each.

Students who do not have definite vocational objectives need improved educational services. The aim of this booklet is to help school workers and laymen renew their efforts, under existing conditions and with available resources, to assist these students.

SM-208D—Elmtown's Youth. By August B. Hollingshead. John Wiley and Sons, Inc. 440 Fourth Ave, New York 16, New York. 480 pages. \$5.

The hypothesis that the social behavior of adolescents is related functionally to the position their families occupy in the social structure of the community is dealt with here. A real midwestern town was the locale chosen.

SM-209D—The Teacher and School Organization. Second edition. By Leo M. Chamberlain and Leslie W. Kindred. Prentice-Hall, Inc. 70 Fifth Ave, New York 11, New York. 681 pages. \$5.

Expanded to cover additional topics, data in this new edition have been brought up to date. In some respects the approach has been altered in terms of recent educational developments.

SM-210D—Career Plays for Young People. By Samuel S. Richmond Plays, Inc. 8 Arlington St, Boston 16, Massachusetts. 341 pages. \$3.50.

A group of plays created to help young people understand the requirements of various careers, including farming and medicine.

SM-211D—Activities in Nutrition Education for Kindergarten through Sixth Grade. By Elizabeth A. Lockwood. The Nutrition Foundation, Inc. Chrysler Bldg, New York 17, New York. 44 pages. \$1.

Relates some of the school activities, and illustrates some of the methods and techniques by which teachers can in-

corporate nutrition education into their daily classrooms.

SM-212D—How Well Are Indian Children Educated? By Shaler Peter-son, Haskell Institute, Lawrence, Kansas. 182 pages. \$1.

A summary of the results of a three-year program of testing achievement of Indian school children in federal Indian schools, as compared to those attending missions, and public schools.

New Textbooks and Supplementary Reading

LINK Aviation, Inc. Binghamton, New York, offers two books on aviation for the high school level.

SM-225D—Fundamentals of Aviation. By Norman Potter and William J. Konicek. 107 pages. 50c.

An outline of a general aviation course with chapters on the history, theory, and technique of flight, the aircraft engine, navigation, and others.

SM-226D—Aviation Education. Teachers' Guide. 75 pages. 50c.

An aid to teachers pioneering in a new field.

SM-227D—Folk Songs and Dances of the Americas. Organization of American States, Pan American Union, Washington 6, D. C. 25 pages. 25c.

Dances from Argentina, Brazil, and

SM-32D

HOW THE Calculator that Remembers SPEEDS AND SIMPLIFIES FIGURING

Almost all calculating consists of obtaining a series of intermediate answers (sums, products, results) that are added or subtracted in succession until the final answer is reached. These exclusive "remembering" dials of the new Burroughs store these intermediate answers automatically and show the accumulated results. Thus the intermediate answers and the final answer are arrived at directly—without the usual time-wasting rehandling of figures.



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These dials show the results of individual computations (addition, subtraction, multiplication, division). As intermediate answers are obtained, they can be added to or subtracted from the amount in the rear dials instantly, by depressing a single key. The two sets of dials work together to simplify calculating to a new degree . . . to make it easier and faster and less costly.

BURROUGHS CALCULATORS

(Continued from page 33)

Panama; singing games from Mexico and the United States; folk songs from Colombia, the Dominican Republic, Haiti, Venezuela, and Bolivia are included.

SM-228D—Effective Shopping. Consumer Education Study of the NEA, 1201 Sixteenth St. N. W. Washington, D. C. 110 pages. 35c.

A practical monograph for all shop-

pers prepared as a unit for high school students. It contains sensible suggestions and helpful ideas on how to get the most value for each dollar spent.

SM-229D—Shorthand in One Week. By Meyer E. Zimmerman, M. E. Zimmerman, 215 West 91 St. New York 24, New York. 20 pages. \$1.

A rapid writing system based on longhand and designed for self-instruction.

SM-230D—How People Work Together: The United Nations and the Specialized Agencies. Prepared by the UN Department of Public Information, Manhattan Publishing Co., 225 Lafayette St., New York 12, New York. 52 pages. Single copies—50¢; 25¢ for 15¢.

A simple and interesting over-all picture of the organization and work of the United Nations. For students at the high-school level.

New Government Publications

Send order to Superintendent of Documents, Government Printing Office, Washington 25, D. C. enclosing coin. Stamps are not acceptable.

Adapting War Surplus to Educational Use. Office of Education, Federal Security Agency, Washington 25, D. C. 40 pages. Free.

Provides descriptions of how some 250 different types of wartime apparatus have been converted for instructional purposes. Explains their uses in school laboratories or shops and their application in the school plant itself.

Adult Education Activities of the Public Schools. Pamphlet No. 107. By Homer Kempfer. Office of Education, Federal Security Agency. 22 pages. 15c.

This report on a 1947-48 survey covers major aspects of what is being done in adult education under the auspices of the public schools. Diversity of approach and types of organized activity are revealed. The levels of education, fields served, location of these activities by state, and other important characteristics of the adult education program are given.

Evaluating and Reporting Student Progress in Business Education. By Clyde W. Humphrey and Marion M. Lamb. Office of Education, Federal Security Agency, Washington 25, D. C. 15 pages. 10c.

An outline suggesting methods of evaluating and improving ways of determining and reporting student progress.

Radio and Television Bibliography. By Gertrude C. Broderick. U. S. Office of Education, Federal Security Agency. 33 pages. 15c.

More than 400 sources of information are listed. Besides general information, there are summaries of published information on careers in radio, broadcasting techniques and script writing, and radio education.

Education in Panama. No. 12. Office of Education, Federal Security Agency, Washington 25, D. C. 90 pages. 25c.

This is one of a series of basic studies on education in several Central and South American countries. The series is based on a program to promote understanding of educational conditions in the American countries, and to encourage cooperation in the field of inter-American education.

Intellectual Abilities in the Adolescent Period. No. 6, Office of Education, Federal Security Agency, Washington 25, D. C. 41 pages. 15c.

A comprehensive outline of the fundamental principles of mental ability and mental traits of adolescents. This report should aid school guidance programs.

SM-55D

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#39-3 VARSITY TRIO • Sensational and new 3-speed record player for 33 1/3, 45 and 78 RPM records. • Heavy duty precision motor and simplicity in change of speed. • Newly designed 6-gram lightweight reproduction arm with 2-way crystal and needles of over 5,000 playings each. • Just a flick of the finger will change the arm from micro-groove to regular type records. • High fidelity super-threelube amplifier. • 10" quality speaker. • Separate tone and volume control. • A custom built instrument designed for the utmost in music enjoyment of all types of records. • Handsome carrying case covered in blue durable alligator leatherette trimmed with brass grille and hardware. • Size: 15 1/2" x 14" x 7 1/2". • A.C. only. • 33 1/3, 45 or 78 RPM.

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or write direct for 1950 brochure and discounts.

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& ELECTRONIC CORP.**

1209 MAIN STREET — DAYTON 2-1111
Manufacturers of America's most
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lowest prices in screen history!

Now — luxury screens at new low money-saving prices —
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EXCLUSIVE DELUXE QUALITY FEATURES! You'll wonder how this new full size 30" x 40" Radiant "Screenmaster" can have so many luxury features . . . and yet be priced so low! It sets up in seconds, adjusts instantly to a score of projection positions, folds into carrying position just like that! Beautifully finished, the "Screenmaster" is built to give years and years of real projection enjoyment. And remember—Radiant screens are the only screens with a *lifetime guarantee*! At this great new low price, it is a value you won't want to miss!

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FREE CATALOGS AND BOOKLETS

Use the SCHOOL MANAGEMENT Readers' Service Listing on page 28 and the postcard. Indicate by numbers of booklet which you desire.

SM-451D—West Disinfecting Company—Soap and Soap Equipment. Devotes considerable space to modern, functional soap equipment designed to provide an economical and efficient means for dispensing soap.

SM-452D—Sylvania Electric Products, Inc.—Fluorescent Fixture Catalog. Includes chart which shows typical lighting needs for classrooms, auditoriums, and offices. There is special section on how to plan a fluorescent lighting installation.

SM-453D—Allied Radio Corporation—1950 Catalog. Gives specially prepared data for proper selection of amplifiers, public address equipment, and inter-communications systems for use in classrooms, lecture halls, auditoriums, and outdoor stadiums. Includes latest types of recorders.

SM-455D—General Electric Company—General Electric Presents Your School Radio Center. Describes establishment of FM radio centers in schools and colleges. Includes specifications for 3 basic station layouts, suggestions for programs, and pictures of radio education in action.

SM-456D—International Business Machines Corporation—The New IBM Electric Executive Typewriter for Distinctive Correspondence, Booklet No. 55-5582-0. Illustrates the four type faces in which the machine comes. Describes device for obtaining straight right-hand margin.

SM-457D—Flintkote Company, Tile-Tex Division—Tuff-Tex Catalog. Reproduces the 12 colors of its marbleized, greaseproof, durable flooring that is particularly good for commercial kitchens and laboratories.

SM-458D—Kearney & Trecker Corporation, Walker-Turner Division—Machine Tools for Metal and Woodworking. Illustrates line of smaller tools.

SM-460D—American Playground Device Company—Illustrated Folder. Detailed information on swimming-pool equipment and heavy-duty repair and replacement parts for playground equipment.

SM-461D—O'Neil-Irwin Manufacturing Company—Illustrated Catalog No. 49-15. Describes system of die-less duplicating of parts and pieces by means of the various Di-Arc precision machines.

TEACHING MATERIALS

SM-475D—Elementary Science Correlation Chart. Young America Films, Inc. 17 x 22 inches. Free.

This new chart shows the page-by-page correlation of 26 YAF films with 43 leading textbooks for elementary school science. The reverse side of the chart contains a description of each film, and a statement of the aims of the YAF elementary science series.

SM-476D—How to Buy and Care for Your Washables. American Institute of Laundering. 24 pages. Free.

This little booklet has home-care hints on purchasing merchandise that will

launder well. It also explains the reasons why many disconcerting things that happen in the washing process are not the fault of the laundering, but of the article itself. The booklet stresses the importance of looking for the "Certified Washable" seal of this institute when you are buying washable articles.

SM-478D—Soap and Other Detergents. Household Finance Corporation. 919

North Michigan Avenue, Chicago 11, Illinois. 26 pages. 5c. (Order directly from Household Finance. Please mention SCHOOL MANAGEMENT.)

Home economics teachers will find this booklet a help in consumer education. It explains the different types of cleansing agents, the way they work, and the best uses for each. Soaps for personal use, shaving preparations, shampoos, detergents for laundering, and other household detergents are discussed.

SM-477D—Annotated List of Books for Supplementary Reading, 1949-50 edition. Children's Reading Service. 96 pages. Free.

This catalog of books for children in kindergarten through grade nine presents over 1,000 carefully chosen books arranged by topics and school grade levels. Library books of all publishers may be combined into one order from the catalog and secured at regular discounts.

SM-37D

Amazing *New* Development in Portable Sound Projectors

Designed for
A.C. or D.C.
Operation

Actual Lift-up Weight
Only 20 lbs.!

The projector and amplifier unit alone of the new Ampro Stylist weighs only 20 lbs. A young girl can easily lift it up to place on stand or table.

Lift-off case with speaker and accessories weighs less than 9 lbs.!



The Ampro
Stylist
\$325.

complete including jack for
microphone and
phonograph

Truly Portable
Complete one-case unit, including projector, amplifier, lift-off case with speaker and accessories, weighs less than 20 lbs!



Quick Easy Set-up
Just lift off case, snap permanently attached, real cranes in place—and the "Stylist" is ready to thread.



Simplified Operation
Control operating panel, with simplified knobs, controls, conveniently mounted on operator's side of projector.



For Small Groups
Quiet-running, easy to set up quickly, the "Stylist" is ideal for classroom and small groups.



For Larger Audiences
The "Stylist" delivers outstanding tone quality, volume and illumination for larger audiences.

A new streamlined, lightweight projector combining precision quality, unusual compactness and popular low price

Here is the perfect 16mm. projector for the school field—the culmination of more than 20 years of experience by Ampro in building fine precision projectors that are used and approved by leading school systems, universities, museums and libraries all over the world.

Astonishing light weight and compactness—made possible by the clever utilization of the new, tough, light materials—make the Stylist ideal for easy moving from room to room—for use by small or large groups. Tested Ampro quality design and construction—assure ease of setting up, simplicity of operation, splendid tone quality and illumination and long, satisfactory service. Remarkable low price—\$325 complete—means outstanding value and assures budget approval in these economy days. Ask your dealer today for an eye-opening demonstration of this new record-breaking Ampro "Stylist"!

Write for free circular giving full detailed "Stylist" specifications.

THE AMPRO CORPORATION

2839 N. Western Avenue, Chicago 18, Ill.



*Trade Mark Reg. U. S. Pat. Off.

A General Precision Equipment Corporation Subsidiary

TELEVISION offers high-school and college graduates a good field for on-the-job training and employment, says Dr. Allen B. DuMont, a pioneer in the field. He stated in the *New York Herald Tribune* that new techniques can best be mastered by young people who are not handicapped by previous training. This situation is also true in the fields of acting, writing, musical production, and photography. Dr. DuMont predicts that 950,000

people will be employed in military and civilian television by 1953, in manufacturing and servicing of sets as well as studio personnel.

While only about 10 percent of the homes in the New York area have sets today, eventually 75 percent will be equipped with television units, he forecast. As new stations are constructed and coaxial cables are extended, the sales area will cover the entire country.

SM-58D

- *Announcing*
- *a Special*
- *Subscription Rate to*
- *Parents' Groups*



**8 months \$1
1 year \$1.50
in groups of
5 or more**

- **for October and November**

Now every mother in the PTA or mother's club in your school may receive the priceless counsel of foremost child-care authorities at HALF the regular cost! They'll welcome this unusual opportunity to enter their subscriptions NOW — when they need so few to get the benefit of the Special Half-Price Group Rate. But this offer expires on November 30th! So urge them to send in their orders NOW!

- **Free Program Service**

This extensive service will help every group leader plan stimulating, timely, and important meetings for her members. The editors of PARENTS' with their keen insight and expert judgement have planned these Programs to meet all the needs and interests of parents' groups. BETTER WAYS WITH YOUNG CHILDREN deals with the pre-school child, and PARENTHOOD IS WHAT YOU MAKE IT discusses the varied problems of the school-age child. Send TODAY for these NEW 1949-50 Programs!



Group Service Bureau
PARENTS' MAGAZINE
Subscription Dept., Bergenfield, N. J.
Please send the Programs requested for the parents in my school:
Pre-school Programs
School Age Programs
Here is \$ _____ for the _____ subscriptions (at the Special Group Rate) listed on the attached sheet.
NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
Organization _____

CHECK LIST OF NEW AUDIO-VISUAL AIDS

Use the SCHOOL MANAGEMENT Readers' Service Listing on page 29 and the postcard. Indicate the key numbers of films about which you wish further information. If you wish to rent or buy any of the films, write directly to the distributor. Please mention SCHOOL MANAGEMENT.

Educational Films

Price—In some cases rental vary, and when that is true the word "apply" is used. Send to distributor for rates. Where films are sent free, except for transportation charges, the word "loan" is used.

SM-300D—On Guard. 17 min. Three year license—\$90. RKO Radio Pictures, Inc. 1270 Avenue of the Americas, New York 20, New York.

Tells the story of the FBI's gathering of evidence and the rounding up of spies previous to the entry of the United States into World War II. Civics, history, and government classes will find this helpful.

SM-301D—Silver Harvest. 20 min. Loan. Institute of Visual Training, 40 East 49 St. New York 17, New York.

Some of Norway's famous fjords and picturesque villages are shown in the opening scenes. Marriage celebrations and national holidays typical of the country are pictured. The sardine fleet is seen locating the elusive fish by both traditional methods and radar. The section showing preparation of dishes made with sardines will have special appeal for home economics classes.

PAUL Hoefer Productions, 612½ South Ridgeley Drive, Los Angeles 36, California, issues three films on geographical points of interest in the United States. 22 min. each. Sale—\$160 each; rent—apply.

SM-302D—Yellowstone-Grand Tetons. The scenic grandeur, thermal wonders, and wild life of this fantastic region are shown.

SM-303D—Historic Death Valley. Prehistoric remains, snow-capped mountains, and desert flowers of this amazing valley are all seen.

SM-304D—Glacier Park-Canadian Rockies. Depicted are the majestic beauty of the Rockies and many of the animals which inhabit the area.

SM-305D—Valley of Triumph. 35 min. Loan. Utah State Dept. of Publicity and Industrial Development, Film Library, Room 111 Atlas Bldg. Salt Lake City, Utah.

Covers many of the historic and scenic highlights of the Great Salt Lake Valley. Salt Lake City, Bonneville Salt Flats, the Bird Refuge at Brigham City, the salt industry, and the famous Tabernacle Organ and Choir are shown.

SM-306D—Service Unseen. 22 min. Loan. Castle Films, 1445 Park Ave. New York 29.

The history of man-made weather, from development of the principles of air conditioning to its present state.

SM-307D—Describing an Incident. 1 reel. Sale—\$90; color; \$45, black and white. Available from lending libraries. Coronet Films, Coronet Bldg. Chicago 1, Illinois.

Shows how an incident that is poorly described can be boring, then illustrates the interest displayed in the same incident when well and colorfully described. Good for stimulating class interest in the development of descriptive ability.

SM-308D—ABC of Pottery Making. 10 min. Sale—sound, black and white, \$36; silent, \$24. Rent—\$2. Bailey Films, Inc. 2044 No. Berendo St. Los Angeles 27, California.

The coil method of pottery making, correct technique in using the templet pattern, hand tools, and the potter's wheel are demonstrated. After seeing the picture beginners can easily make a clay bowl.

SM-309D—Partners. 19 min. Loan. Produced by the Jam Handy Organization. Available from G. M. Philpot, Ralston-Purina Co. St. Louis, Missouri.

The part dogs play in human happiness and welfare, as "eyes" for the blind, playmates for children, and their general usefulness is illustrated.

SM-310D—Living Silver. 15 min. Sale—\$125; rent—\$7.50. A. F. Films, Inc. 1600 Broadway, N. Y. 19, N. Y.

Starting with a mural of an ancient metal work shop, painted on the wall of an Egyptian tomb, the story of silver, its history, contemporary production and practical uses, is told. Formal and simple table settings are pictured. Useful for homemaking and home economics classes.

SM-311D—The Story That Couldn't Be Printed. 10 min. Rent—black and white, \$1.50. CIO Film Division, Department of Education and Research, 718 Jackson Pl. N. W. Washington 6, D. C.

The story of John Peter Zenger,

SM-59D

HILLYARD

FLOOR TREATMENTS AND Maintenance Products

Tested and Approved!

HILLYARD SALES CO's

Distribution HILLYARD CHEMICAL CO., ST. JOSEPH, MO.
670 Alabama St., San Francisco 12, Calif. 1947 Broadway, New York, N. Y.

colonial printer and publisher, whose fight for a free press marks a milestone in the history of this country.

Filmstrips



A colonial flag bee. Scene from the film "The Flag Develops," reviewed as SM-381D

FILMFAK Productions, 955A First Ave., New York 22, New York, offers a series of three colored filmstrips under the title "The Story of the American Flag." Sale-\$5 each; the set, with study guide, \$11.50.

SM-350D—The Flag is Born. Shows flags which have flown over America from the time of the Vikings. Follows developments which led to the adoption of the first Stars and Stripes on June 14, 1777.

SM-351D—The Flag Develops. Birth of the Star-Spangled Banner, a colonial "flag bee," the first raising of our flag over an American school, and other historical details are seen.

SM-352D—How to Honor and Display the Flag. Based on the Federal Flag Law of June 22, 1942. Ends with the pledge of allegiance to the flag.

LONG Filmslide Service, 944 Regal Road, Berkeley 8, California announces three black and white filmstrips in the "Jack Series."

SM-353D—Jack Banks His Savings. Grades three to six. 27 frames. \$2.50.

SM-354D—Jack Takes a Trip by Bus. Grades three to six. 36 frames. \$3.

SM-355D—Jack Sees the News Made. Grades six to nine. 42 frames. \$3.

SM-356D—Smart Driving. 54 frames. Sale-\$2. Available from N.E.A., 1201 Sixteenth St. N. W., Washington 6, D. C. or National Highway Users Conference, 938 National Press Bldg., Washington 4, D. C.

Designed for use in connection with high-school driver education courses. May also be used with any class studying highway traffic safety. A teachers manual accompanies strip.

SM-357D—Spending Your Food Dollars. 78 frames. Loan. Household Finance Corp. Consumer Education Dept. 919 No. Michigan Ave. Chicago 11, Illinois.

Describes the basic principles of wise food buying. Also includes recommendations for food storage and preparation to preserve food values and avoid waste. Adaptable for Home economics classes.

SM-360D—None So Blind. 15 mm. 15 min. Sale—sound, \$6; silent, \$2.25. Anti-Defamation League of B'nai B'rith, 212 Fifth Ave., New York 10, New York.

A simple cartoon, in color, presents a light satire on problems of prejudice. There is also a thoughtful analysis of the need for good human relations.

SM-361D—Creating With Clay. Sale-\$3.50. New York University Film Library, Washington Square East, New York 3, New York.

Shows step-by-step development of a clay model. Designed as an aid in presenting technique to camp groups and training classes.

THE Divinity School, Visual Education Service, Yale University, 409 Prospect St., New Haven 11, Connecticut, announces two colored filmstrips on life in Japan for grades one through six. Sale-\$10 each; rent-\$1.50 each. **SM-358D—Jiro and Hanako of Japan: Home, School, and Church.** Shows how a typical modern Japanese boy and girl live, dress, what they eat, and their school and church activities. **SM-359D—Jiro and Hanako of Japan:**

Work and Play. Illustrates how Japanese boys and girls help their parents, the games they play, and what they do on picnics, New Year's Festival, and Girls' Day (Doll Festival).

ENCYCLOPAEDIA Britannica Films, Inc., 1150 Wilmette Ave., Wilmette, Illinois, announces a new series of teaching filmstrips on "Our Community Workers," produced mainly for use at the primary grade level

in social studies and geography classes.

Sale-set of four, \$10.80.

The Policeman. Explains police duties and follows policeman through a day.

The Fireman. Shows firemen practicing and at work at a real fire.

The Mailman. Shows the work of the man who delivers the mail.

The Doctor. Shows a children's doctor at his office, in a hospital, and visiting in the home of a young patient.

(Turn page)

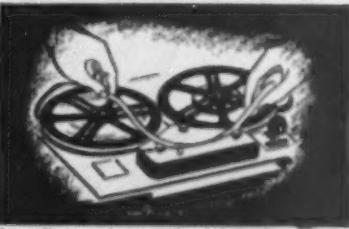
SM-360D

Watch for New Records in Student Achievement



Model BR-614 "SOUNDMIRROR" is portable, handsomely styled in durable luggage type case. Other attractive models available in mahogany and blonde to fit the school budget.

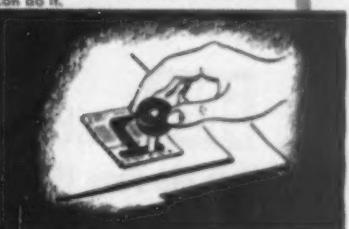
Here's what the "SOUNDMIRROR" OFFERS:



Recording tape is easy to load. Recordings can be "erased" and tape used over and over again.



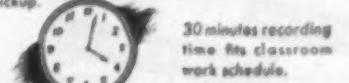
Recordings can be "edited" with scissors and cellulose tape. Any student can do it.



One cont. of gives instantaneous fast forward or fast rewind. Indexer and Log book facilitate location of specific recordings quickly.



Microphone is one of the finest available. Provides excellent recording pickup.



30 minutes recording time fits classroom work schedule.

Brush . . . FIRST IN MAGNETIC RECORDING

*Trade Mark Registered

IN a leading university, the makers of SOUNDMIRROR have been keeping careful records of student achievement through the aid of the modern method of tape recording.

The SOUNDMIRROR was used for drill work. It speeded the time of recognition of tones and symbols on the part of the class; it expanded the time of the instructor. It permitted students to hear themselves as they actually were—induced self-criticism, interest and understanding.

First in the pioneering of tape recording, The Brush Development Company, makers of SOUNDMIRROR, wish also to lead in its practical application in education. An accredited teacher or educator may have copies of this report of student achievement simply by sending the coupon below.

SOUNDMIRROR*

SEND THIS COUPON TODAY!

THE BRUSH DEVELOPMENT COMPANY, Dept. DS
3005 Perkins Avenue, Cleveland 14, Ohio

Please send me, without obligation, the report on student achievement in classes where the SOUNDMIRROR was used.

Name _____

Address _____

City _____

Zone _____ State _____

Film Catalogs

YOUNG America Films, Inc., 18 East 41 St, New York 17, New York, offers two new free catalogs, one of filmstrips and one of 16 mm. films. Both list materials available as of September, 1949.

SM-370D—16 mm. Film Catalog 86 film titles. 8 pages.

SM-379D—Filmstrip and Slide Catalog. 85 titles. 4 pages.

SM-360D—Picture Catalog. Third edition, 1948. Society for Visual Education, Inc., 100 East Ohio St., Chicago 11, Illinois. 31 pages. Free. An extensive listing of educational filmstrips.

SM-381D—Westinghouse Sound Motion Pictures and Slide Films—1949. (Booklet B-4273). Westinghouse Electric Corp., Box 868, Pittsburgh 30, Pennsylvania. 46 pages. Free.

Films for education and entertainment programs are described.

SM-377D—Movies About Oil. Oil Industry Information Committee, 670 Fifth Ave., New York 19, New York. 15 pages. Free.

Many of the films listed are useful for science, social studies, and vocational guidance classes.

SM-61D

BACTERIA go to school, TOO!



COMBAT AIRBORNE BACTERIA SCIENTIFICALLY with SAFE-T-AIRE ULTRAVIOLET GERMICIDAL EQUIPMENT by HANOVIA

Safe-T-Aire Cil-
l 100
Sunnbeam
Unit Model ST
2322

- Provides protection from airborne infection
- Reduces absenteeism caused by illness
- Promotes better health for pupils and all personnel



Scientific research has shown the very real dangers of infection by airborne bacteria in public places such as school classrooms. Schools are constant sources of cross infection, particularly in the primary and elementary departments. HANOVIA Safe-T-Aire units destroy airborne bacteria and control the incidence of contagious diseases from cross infection.

Investigate this scientific weapon NOW!

For further information, please write for our free booklet "Ultraviolet Air Disinfection in Schools."

HANOVIA Chemical & Manufacturing Co.

World's Oldest and Largest Producer of Ultraviolet Equipment
Dept. SM-111
Newark 3, N. J.

Check Reader's Service Listing on page 29. Use the postcard to request further information from advertisers, and about new products.

SM-62D

16mm Sound-on-Film PROJECTOR



Large 10-Tooth
Sprockets—
4 teeth engaged
in film at all
times, giving
maximum film
life.

The new REXABC with high intensity arc lamp, 65 watt output amplifier, and a most convenient high volume speaker system is available. BEFORE YOU DECIDE TO PURCHASE write for the new catalog detailing the advanced features found only in a REX 16mm Sound-on-Film Projector.

HOLMES PROJECTOR CO.
1815 ORCHARD ST. CHICAGO 14, ILL. U. S. A.

SM-63D

FREE ALLIED'S New 196-Page 1950 RADIO CATALOG

Everything in Radio
FOR THE SCHOOL



- Radio Training Kits
- Test Instruments
- Radio & Electronic Parts
- Recording Equipment
- Public Address Systems
- Television & Radio Sets

ALLIED RADIO

833 West Jackson Boulevard
Dept. 4-L-9
Chicago 7, Illinois

Send for FREE
Radio Catalog

SM-375D—1949-1950 School List Catalog. Films Incorporated, 330 West 42 St, New York 18, New York. 72 pages. Free to schools.

An extensive listing of feature films, well cataloged as to suitability for social studies, literature, history, music classes, religious classes and so forth.

SM-376D—16 mm Sound Films—1949. Audio Film Center, 45 West 45 St, New York 19, New York. 62 pages. Free.

Listed are 3,000 sound films including features, educational, and sport shorts.

Our Audio-Visual Committee

THIS listing of educational films was compiled and edited by Jane Bonneville with the cooperation of the following committee:

Colia Anderson,
New York University Film Library
Louise Condit,
Metropolitan Junior Museum
Leslie E. Frye,
Director, Division of Visual Education Cleveland Board of Education
Carolyn Goss,
Audio-Visual Center, Indiana University
Gerald B. Cagle,
Head, Audio-Visual Aids Department, University of Georgia

Nellie Lee Jenkins,
Director, Division of Audio-Visual Education, St. Louis Board of Education
Dr. Grace Ramsey,
American Museum of Natural History
Mrs. Esther Speyer,
Chairman, Motion Picture Committee, United Parents Association

Leila Trolinger,
Director, Bureau of Audio-Visual Instruction, University of Colorado
Thurman White,
Director of Visual Instruction, University of Oklahoma
Franklin T. Mathewson,
Supervisor, Audio-Visual Education, White Plains, New York, Board of Education

Herbert R. Jensen,
Manager, Columbia University Educational Films

SM-64D

FREE Catalog!

16 mm. SOUND FILMS
3,000
Educational films
of all kinds!

AUDIO FILM CENTER

45 W. 45th St. NEW YORK 17, N.Y.
BRANCHES IN CHICAGO AND SAN FRANCISCO

SM-65D

GIVE YOUR STUDENTS A clear picture of other countries, through FILMS OF THE NATIONS

An insight into the industry, Social Welfare, Sports, Traditions, Scenery and Ideas of countries such as Denmark, Sweden, Holland, Belgium, the Far East and many other lands, through beautifully photographed films. New Kodastan & Black & White films are now out—done in 35 mm. projection and with synchronized, authoritative commentaries of famous world leaders—excited to students. The answer to the problem of the teacher as well as the teacher-trainer and historian. There is no equal to these exciting school room visits to other lands through "Films of the Nations." Write today for your free catalogues to:



NOVEMBER, 1949

NEW AUDIO-VISUAL EQUIPMENT

Use the SCHOOL MANAGEMENT Readers' Service Listing on page 20 and the postcard. Indicate key numbers of products about which you wish to receive further information.

Tape Splicer

SM-421D

Critically efficient splicing of 3/4-inch magnetic recording tape is done by the Prestoneal MT-1 Presto-Splicer. Splice is inaudible even with playback amplifier at maximum gain. For precise radio work, this device eliminates need for re-recording after editing and splicing. With it, perfect synchronization of tape sound track and film can be made.

Principle of the machine is based on heat and precise pressure applied within a controlled time cycle. This gives perfect diagonal splices with plastic weld.



Record Player

SM-422D

Specially designed to meet school requirements is the Audio-Aid ST-1 record player made by the Arthur Ansley Manufacturing Company. All controls are on a sloping panel at the rear for easy use by teacher while facing the class. Hand holds make it easy to carry player from room to room. The heavy cabinet, finished in limed oak, has a cover with lock to prevent unauthorized use.

The machine accommodates 7, 10, and 12-inch records and has speeds of 33 1/3, 45, and 78 r.p.m. Dual speakers and 10-watt output give excellent tone quality and volume. Provision is made for microphone and external speaker or headphones.



Sound Slide Projector

SM-423D

The Movie-Mite Corporation recently produced the Bell-Boy, a handy, new sound slide projector unit with desk-top screen. It utilizes an S.V.E. model G projector with 300-watt lamp and 360-degree swivel which assures easy screen framing from any angle. There is an 8-inch, Alnico V, permanent magnet speaker. High fidelity amplifier has an 8-watt output. Record capacity is 16 inches.

This 29 1/2-pound unit has a gear-driven motor sealed in oil. Speed is 33 1/2 r.p.m.

Cold Grid Light

Photography instructors and camera enthusiasts will welcome the new Aristo cold grid light for enlargers of all sizes. It gives even illumination over all parts of the negative. Its special quality of actinic light prints from the negative sharp, clean, fast, and with great detail.

Instant-starting lamp can burn for hours at a temperature slightly higher than that of the human body. Consequently it will not buckle or roast negatives. The grids come in varying speeds and are interchangeable.

SM-434D

sections and additional prints of all pictures produced by any member of the group, and at the lowest possible cost.

Under present conditions it is 10c per foot for black-and-white sound film and 25c per foot for color sound film. Because of laboratory requirements in making this replacement footage, it is necessary to supply a minimum of 50 feet of black and white or 25 feet of color.

SM-46D



GIVE THEM ALL THE LIGHT THEY NEED

with this new 8-foot slimline fluorescent lamp

HERE'S the biggest slimline lamp of all—G.E.'s T-12! It's 8 feet long, 1 1/8 inches in diameter, 75 watts. It has a greater light output than any other G-E fluorescent lamp. This makes possible higher schoolroom lighting levels—with lower maintenance in proportion to the amount of light given. (The average school needs at least 4 times more light, according to school lighting authorities.) And this new lamp offers all the advantages of G-E slimline lamps:

1. New streamlined appearance.
2. Easy, low-cost maintenance. Single-pin base makes it easy to install and replace.
3. Instant start—no starters needed.
4. High efficiency—more light per watt.
5. Long life.

Get all the details on the new General Electric T-12 slimline lamp from the G-E Lamp district office near you. And for more information on up-to-date school lighting, write for General Electric's special school issue of "The Magazine of Light", General Electric, Dept. 166-SM11, Nela Park, Cleveland 12, Ohio.

You can put your confidence in—

GENERAL  **ELECTRIC**

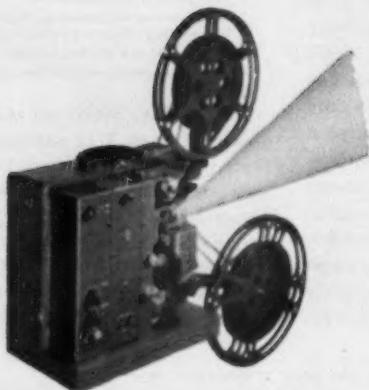


DETAIL That's Beautifully Sharp!



**YOU SEE IT ALL when your 16mm films
are projected with the**

RCA 400



**VISUAL PRODUCTS
RADIO CORPORATION of AMERICA
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.**

In Canada: RCA VICTOR Company Limited, Montreal



*First in Sound...
Finest in Projection*

IN EDUCATIONAL, business and industry films, it is not the scene that counts most. It is how forcefully and how vividly the picture is presented on the screen that determines whether or not the scene will be noted and remembered.

Intimate close-up shots—projected with the RCA "400"—show the minute parts of a subject forcefully, exactly, in crisp detail. For example, the roundness of the dewdrops on a lily... the delicate-toned, curved petals, pictured above—you see them all so vividly... so lifelike.

With the RCA "400" projected pictures are

crisply brilliant... sharply defined to the edges of the screen... outstandingly clear in detail. Voices, music and sound effects are reproduced with dramatic realism. RCA "400" projection increases the intensity of the screen image... creates greater interest in the film... strengthens audience response.

RCA "400" JUNIOR. The only single-case standard 16mm sound projector of fully professional quality.

RCA "400" SENIOR. Provides theatre-quality reproduction of 16mm sound and pictures for larger audiences, auditoriums or larger rooms.

MAIL COUPON FOR MORE DETAILED INFORMATION

VISUAL PRODUCTS (Dept. 81K)
Radio Corporation of America
Camden, N. J.

Please send me complete information on the RCA "400" sound projection.

Name _____

School _____

Street _____

City _____ State _____